ALL8894WMP

8-Port 10/100/1000Mbps with 4-port PoE

Web Management Switch

User´s Manual

Content

Introduction

Product Overview

This switch is a Web Smart Switch equipped with 8-ports 10/100/1000BaseT(X) with 4 PoE Ports. It is designed for easy installation and high performance in an environment where traffic is on the network and the number of users increased continuously. The compact rigid 19" rack-mount size is specifically designed for small to medium workgroups. It can be installed where space is limited; moreover, it provides smooth network migration and is easy to upgrade the network capacity.

In addition, the switch features comprehensive and useful functions, such as: QoS (Quality of Service), Spanning Tree, VLAN, Power over Ethernet (PoE), Link Aggregation, SNMP/RMON, IGMP Snooping capability via the intelligent software. It is suitable for both metro-LAN and office application.

Web Management Features

➢ Configuration
System
Ports
VLANs
Aggregation
LACP
RSTP
IGMP Snooping
Mirroring
Quality of Service
Power over Ethernet
Storm Control

➢ Monitoring
Statistics Overview
Detailed Statistics
LACP Status
RSTP Status

IGMP Status

VeriPHY

Ping

➢ Maintenance

Warm Restart

Factory Default

Software Upload

Configuration File Transfer

Logout

Specifications

➢ Standard

IEEE 802.3 10BaseT

IEEE 802.3u 100BaseTX

IEEE 802.3ab 1000BaseT

IEEE 802.3af PoE

IEEE 802.3at PoE$^+$

IEEE 802.3z 1000BaseSX/LX

IEEE 802.3x Full-duplex Flow Control

IEEE 802.3ad Link Aggregation

IEEE 802.1Q VLAN

IEEE 802.1d Spanning tree protocol

IEEE 802.1w Rapid Spanning tree protocol

IEEE 802.1p QoS

➢ Number of Port

8-port 10/100/1000BaseT(X) with 4-port PoE

Mechanical

➢ LED Indicator

Port 1~8: Link/ Act, 1000M.

Port 1~4: PoE

Per Unit: Power

➢ Power Consumption: 65 Watts (Max), 30 Watts per port

➢ Power Input: 100~240V/AC, 50~60HZ

Product Dimensions/ Weight: 266 × 160 × 44 mm (L × W ×H) / 1.6kg

Performance

➢ <u>MAC Address & Multicast group: 8K</u>
➢ <u>Buffer Memory: 176 KB</u>
➢ <u>Jumbo Frames: 9.6K</u>
➢ <u>Transmission Method: Store and Forward</u>

Package Contents

Before you start to install this switch, please verify your package that contains the following items:

● One PoE Gigabit Ethernet Switch
● One AC Power Cord
● One User Manual

Power Cord

Hardware Description

This part primarily presents hardware of this switch, physical dimensions and functional overview would be described.

Physical Dimensions/ Weight

266 × 160 × 44 mm (L × W ×H) / 1.6kg

Front Panel

The front Panel of the Web Smart Switch consists of 8 gigabit RJ-45 ports+2 gigabit SFP open slot. The LED Indicators are also located on the front panel.

LED Indicators

The LED Indicators present real-time information of systematic operation status. The following table provides description of LED status and their meaning.

Table 1-1 LED Indicators

LED	Status	Description
Power	On	Power is on.
	Off	Power is off.
Link/ACT Port 1~8	On	10/100/1000 Link is connected
	Off	10/100/1000 Link is disconnected
1000M Port 1~8	On	Link 1000Mbps
	Off	Link 10/100Mbps
PoE Port 1~4	On	providing the power
	off	not providing the power

Rear Panel

The 3-pronged power plug is placed at the rear panel of the switch right side shown as below.

Hardware Installation

Set the switch on a large flat space with a power socket close by. The flat space should be clean, smooth, level and sturdy. Make sure there is enough clearance around the switch to allow attachment of cables, power cord and allow air circulation. The last, use twisted pair cable to connect this switch to your PC then user could start to operate the switch.

Software Description

This part instructs user how to set up and manage the switch through the web user interface. Please follow the description to understand the procedure.

At the first, open the web browser, and go to 192.168.2.1 site then the user will see the login screen. Just clicks the **Apply** then the login process is completed and comes out the sign "Password successfully entered".

Please enter password to login

Password: [   ]

Apply

Password Successfully Entered

Figure 1-1

After the user login, the right side of website shows all functions as Fig. 1-2.

Figure 1-2

Configuration

System

System Configuration

This page shows system configuration information. User can configure lots of information as Fig. 1-3:

System Configuration

MAC Address	00-0f-c9-05-bc-df
S/W Version	V110915
H/W Version	1.0
Temperature	0 °C
Active IP Address	192.168.2.1
Active Subnet Mask	255.255.255.0
Active Gateway	192.168.2.254
DHCP Server	0.0.0.0
Lease Time Left	0 secs

DHCP Enabled	☐
Fallback IP Address	192.168.2.1
Fallback Subnet Mask	255.255.255.0
Fallback Gateway	192.168.2.254
Management VLAN	1
Name	
Password	
Inactivity Timeout (secs)	0
SNMP enabled	☑
SNMP Trap destination	0.0.0.0
SNMP Read Community	public
SNMP Write Community	private
SNMP Trap Community	public

Apply   Refresh

Figure 1-3

➢ MAC Address: Displays the unique hardware address assigned by manufacturer (default).

➢ S/W Version: Displays the switch's firmware version.

➢ H/W Version: Displays the switch's Hardware version.

➢ DHCP Enabled: Click the box to enable DHCP

➢ Fallback IP address: Manually assign the IP address that the network is using. The default IP is 192.168.2.1

➢ Fallback Subnet Mask: Assign the subnet mask to the IP address

➢ Fallback Gateway: Assign the network gateway for industrial switch. The default gateway is 0.0.0.0.

➢ Management VLAN: ID of a configured VLAN (1-4096) through which you can manage the switch. By default, all ports on the switch are members of VLAN 1. However, if the management VLAN is changed, the management station must be attached to a port belonging to this VLAN.

➢ Name: Type in the new user name (The default value is 'admin').

➢ Password: Type in the new password (The default value is 'admin').

➢ SNMP Enabled: Enables or disables SNMP on the switch. Supports SNMP version 1and 2c management clients.

➢ SNMP Trap Destination: IP address of the trap manager to receive notification messages from this switch. Traps indicating status changes are issued by the switch to specified trap managers. You must specify trap

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managers so that key events are reported by this switch to your management station.

➢ SNMP Read Community: A community string that acts like a password and permits access to the SNMP database on this switch. Authorized management stations are only able to retrieve MIB objects.

➢ SNMP Trap Community: Community string sent with the notification operation.

Ports

Port Security ensures access to a switch port based on MAC address, limits the total number of devices from using a switch port, and protects against MAC flooding attacks.

<u>Port Configuration</u>

In Port Configuration, you can set and view the operation mode for each port.

➢ Enable Jumbo Frames: This switch provides more efficient throughput for large sequential data transfers by supporting jumbo frames on Gigabit Ethernet ports up to 9.6 KB. Compared to standard Ethernet frames that run only up to 1.5 KB, using jumbo frames significantly reduces the per-packet overhead required to process protocol encapsulation fields.

➢ Power Saving Mode: Adjusts the power provided to ports based on the length of the cable used to connect to other devices. Only sufficient power is used to maintain connection requirements.

➢ Mode: allow user to manually set the port speed such as Auto, 10 half, 10 Full, 100 Half, 100 Full, 1000 Full or Disabled. User may press Apply button to complete the configuration procedure.

Port Configuration

Enable Jumbo Frames ☐

PERFECT_REACH/Power Saving Mode:		Full ▾

Full
Link-up
Link-down
Disable

Port	Link	Mode	Flow Control
1	Down	Auto Speed ▾	☐
2	100FDX	Auto Speed ▾	☐
3	Down	Auto Speed ▾	☐
4	100FDX	Auto Speed ▾	☐
5	Down	Auto Speed ▾	☐
6	Down	Auto Speed ▾	☐
7	Down	Auto Speed ▾	☐
8	Down	Auto Speed ▾	☐

Figure 1-4-1

Port	Link	Mode	Flow Control
1	Down	Auto Speed ▾	☐
2	100FDX		☐
3	Down		☐
4	100FDX		☐
5	Down		☐
6	Down	Auto Speed ▾	☐
7	Down	Auto Speed ▾	☐
8	Down	Auto Speed ▾	☐

Auto Speed
10 Half
10 Full
100 Half
100 Full
1000 Full
Disabled

Drop frames after excessive collisions		☐

[Apply] [Refresh]

Figure 1-4-2

VLAN

A Virtual LAN (VLAN) is a logical network grouping that limits the broadcast domain, which would allow you to isolate network traffic, so only the members of the same VLAN will receive traffic from the ones of the same VLAN. Basically, creating a VLAN from a switch is logically equivalent of reconnecting a group of network devices to another Layer 2 switch. However, all the network

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devices are still plugged into the same switch physically.

Port Segmentation (VLAN) Configuration

➢ VLAN ID: ID of configured VLAN (1-4096, no leading zeroes).
➢ VLAN Configuration List: Lists all the current VLAN groups created for this system. Up to 16 VLAN groups can be defined. VLAN 1 is the default untagged VLAN.

Port Segmentation (VLAN) Configuration

Add a VLAN

| VLAN ID | 12 |

Add

VLAN Configuration List

12 ⦿							

Modify   Delete   Refresh

Port Config

Figure 1-5-1

VLAN Setup

The switch supports up to 16 VLANs based on 802.1Q standard. From the VLAN Membership page you can create and delete VLANs, and change the VLAN port membership.

VLAN Setup

VLAN ID: 12			
Port	Member	Port	Member
Port 1	✓	Port 5	☐
Port 2	✓	Port 6	☐
Port 3	☐	Port 7	✓
Port 4	☐	Port 8	✓

Apply   Refresh

Figure 1-5-2

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VLAN Per Port Configuration

The 802.1Q Per Port Configuration page allows you to change the VLAN parameters for individual ports or trunks. You can configure VLAN behavior for 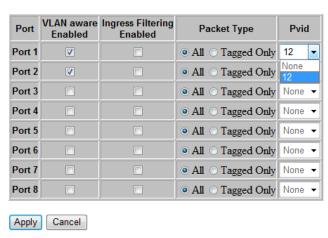specific interfaces, including the accepted frame types and default VLAN identifier (PVID). Each row of the table corresponds to one port or trunk; trunked ports cannot be configured individually; configure the trunk instead.

VLAN Per Port Configuration

Port	VLAN aware Enabled	Ingress Filtering Enabled	Packet Type	Pvid
Port 1	☑	☐	⦿ All ○ Tagged Only	12 ▾
Port 2	☑	☐	⦿ All ○ Tagged Only	None / 12
Port 3	☐	☐	⦿ All ○ Tagged Only	None ▾
Port 4	☐	☐	⦿ All ○ Tagged Only	None ▾
Port 5	☐	☐	⦿ All ○ Tagged Only	None ▾
Port 6	☐	☐	⦿ All ○ Tagged Only	None ▾
Port 7	☐	☐	⦿ All ○ Tagged Only	None ▾
Port 8	☐	☐	⦿ All ○ Tagged Only	None ▾

Apply   Cancel

Figure 1-5-3

➢ Port/Trunk: The port number of the port or the ID of a trunk.
➢ VLAN Aware Enabled: VLAN aware ports are able to use VLAN tagged frames to determine the destination VLAN of a frame. (Default: Enabled)
➢ VLAN aware ports will strip the VLAN tag from received frames and insert the tag in transmitted frames (except for the PVID). VLAN unaware ports will not strip the tag from received frames or insert the tag in transmitted frames.
➢ Ingress Filtering Enabled: If enabled, incoming frames for VLANs which do not include this ingress port in their member set will be discarded. (Default: Disabled)
➢ Packet Type: Sets the interface to accept all frame types, including tagged or untagged frames, or only tagged frames. (Default: All) If the Packet Type is set to "All," the port can accept incoming tagged and untagged packets. Any received packets that are untagged are assigned to the default VLAN. Any tagged packets will be dropped unless the port is a member of the VLAN identified by the VLAN tag in the packet. If the Packet Type is set to "Tagged Only," the port will drop untagged packets and will only receive tagged packets. Tagged packets will be dropped unless the port is a member of the VLAN identified by the VLAN tag in the packet. Switches should be connected to each other with the Packet Type set to "Tagged

Only."

> PVID: The PVID (Port VLAN ID) is associated with untagged, ingress packets. It is assigned to untagged frames received on the specified interface. The PVID has no effect on ports that have Packet Type set to "Tagged Only." (Default PVID: 1) It is not possible to remove a port from VLAN 1 unless its PVID has been changed to something other than 1. Outgoing packets are tagged unless the packet's VLAN ID is the same as the PVID. When the PVID is set to "None," all outgoing packets are tagged.

※Note: If you select "Tagged Only" mode for a port, we recommend setting the PVID to "None" as the standard configuration.

Aggregation

Port trunk allows multiple links to be bundled together and act as a single physical link for increased throughput. It provides load balancing, and redundancy of links in a switched inter-network. Actually, the link does not have an inherent total bandwidth equal to the sum of its component physical links. Traffic in a trunk is distributed across an individual link within the trunk in a deterministic method that called a hash algorithm. The hash algorithm automatically applies load balancing to the ports in the trunk. A port failure within the trunk group causes the network traffic to be directed to the remaining ports. Load balancing is maintained whenever a link in a trunk is lost or returned to service.

Aggregation / Trunking Configuration

To assign a port to a trunk, click the required trunk number, and then click Apply.

Figure 1-6

LACP

IEEE 802.3ad Link Aggregation Control Protocol (LACP) increases bandwidth by automatically aggregating several physical links together as a logical trunk and providing load balancing and fault tolerance for uplink connections.

LACP Port Configuration

➢ Port: The port number.
➢ Enabled: Enables LACP on the associated port.
➢ Key Value: Configures a port's LACP administration key. The port administrative key must be set to the same value for ports that belong to the same link aggregation group (LAG). If this administrative key is not set when an LAG is formed (i.e., it has the null value of 0), this key will automatically be set to the same value as that used by the LAG.

LACP Port Configuration

Port	Protocol Enabled	Key Value
1	☐	auto
2	☐	auto
3	☐	auto
4	☐	auto
5	☐	auto
6	☐	auto
7	☐	auto
8	☐	auto

Apply Refresh

Figure 1-7

RSTP

IEEE 802.1w Rapid Spanning tree protocol (LACP) provides a loop-free network and redundant links to the core network with rapid convergence to ensure faster recovery from failed links, enhancing overall network stability and reliability.

RSTP System Configuration

➢ System Priority: This parameter configures the spanning tree priority globally for this switch. The device with the highest priority becomes the STP root device. However, if all devices have the same priority, the device with the lowest MAC address will then become the root device.
➢ Hello Time: Interval (in seconds) at which the root device transmits a

configuration message (BPDU frame). Number between 1-10 (default is 2).

➤ Max Age – The maximum time (in seconds) a device can wait without receiving a configuration message before attempting to reconfigure. That also means the maximum life time for a BPDU frame. Number between 6-40 (default is 20).

➤ Forward Delay: The maximum time (in seconds) the root device will wait before changing states (i.e., discarding to learning to forwarding). Number between 4 – 30 (default is 15).

➤ Force Version: Set and show the RSTP protocol to use. Normal - use RSTP, Compatible - compatible with STP.

RSTP System Configuration

System Priority	32768 ▼
Hello Time	2
Max Age	20
Forward Delay	15
Force version	Normal ▼

Figure 1-8-1

RSTP Port Configuration

➤ Port: The port ID. It cannot be changed. Aggregations mean any configured trunk group.

➤ Enabled: Click on the tick-box to enable/disable the RSTP protocol for the port.

➤ Edge: Expect the port to be an edge port (linking to an end station) or a link to another STP device.

➤ Path Cost: This parameter is used by the STP to determine the best path between devices. Therefore, lower values should be assigned to ports attached to faster media, and higher values assigned to ports with slower media. Set the RSTP pathcost on the port. Number between 0 - 200000000. 0 means auto generated pathcost.

RSTP Port Configuration

Port	Protocol Enabled	Edge	Path Cost
Aggregations	☐		
1	☐	☑	auto
2	☐	☑	auto
3	☐	☑	auto
4	☐	☑	auto
5	☐	☑	auto
6	☐	☑	auto
7	☐	☑	auto
8	☐	☑	auto

Apply Refresh

Figure 1-8-2

RSTP System Configuration

System Priority	32768 ▾
Hello Time	
Max Age	
Forward Delay	
Force version	▾

0
4096
8192
12288
16384
20480
24576
28672
32768
36864
40960
45056
49152
53248
57344
61440

RSTP Port C[onfigura]tion

Port	[Protocol E]nabled	Edge	Path Cost
Aggregations			

Figure 1-8-3

RSTP System Configuration

System Priority	32768 ▾
Hello Time	2
Max Age	20
Forward Delay	15
Force version	Normal ▾

Compatible
Normal

Figure 1-8-4

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IGMP Snooping

IGMP Snooping is the process of listening to IGMP network traffic. IGMP Snooping, as implied by the name, is a feature that allows a layer 2 switch to "listen in" on the IGMP conversation between hosts and routers by processing the layer3 IGMP packets sent in a multicast network.

When IGMP Snooping is enabled in a switch it analyzes all IGMP packets between hosts connected to the switch and multicast routers in the network. When a switch hears an IGMP report from a host for a given multicast group, the switch adds the host's port number to the multicast list for that group. And, when the switch hears an IGMP Leave, it removes the host's port from the table entry.
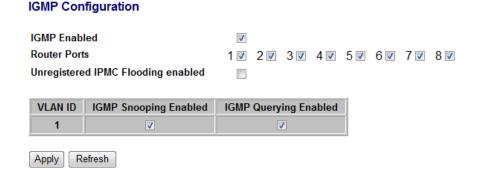
Prevents flooding of IP multicast traffic, and limits bandwidth intensive video traffic to only the subscribers.

IGMP Configuration

➢ IGMP Enabled: When enabled, the switch will monitor network traffic to determine which hosts want to receive multicast traffic.
➢ Router Ports: Set if ports are connecting to the IGMP administrative routers.
➢ Unregistered IPMC Flooding enabled: Set the forwarding mode for unregistered (not-joined) IP multicast traffic. The traffic will flood when enabled, and forward to router-ports only when disabled.
➢ IGMP Snooping Enabled: When enabled, the port will monitor network traffic to determine which hosts want to receive the multicast traffic.
➢ IGMP Querying Enabled: When enabled, the port can serve as the Querier, which is responsible for asking hosts if they want to receive multicast traffic.

IGMP Configuration

IGMP Enabled	☑
Router Ports	1☑ 2☑ 3☑ 4☑ 5☑ 6☑ 7☑ 8☑
Unregistered IPMC Flooding enabled	☐

VLAN ID	IGMP Snooping Enabled	IGMP Querying Enabled
1	☑	☑

[Apply] [Refresh]

Figure 1-9-1

Mirroring

Port Mirroring is used on a network switch to send a copy of network packets seen on one switch port (or an entire VLAN) to a network monitoring connection on another switch port. This is commonly used for network appliances that require monitoring of network traffic, such as an intrusion-detection system.

Mirroring Configuration

➢ Port to Mirror to: The port that will "duplicate" or "mirror" the traffic on the source port. Only incoming packets can be mirrored. Packets will be dropped when the available egress bandwidth is less than ingress bandwidth.

➢ Ports to Mirror: Select the ports that you want to mirror from this section of the page. A port will be mirrored when the "Mirroring Enabled" check-box is checked.

Mirroring Configuration

Port	Mirror Source
1	☐
2	☐
3	☐
4	☐
5	☐
6	☐
7	☐
8	☐

Mirror Port	1 ▾

[Apply] [Refresh]

Figure 1-10-1

Mirroring Configuration

Port	Mirror Source
1	☐
2	☐
3	☐
4	☐
5	☐
6	☐
7	☐
8	☐

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

Apply   Refresh

Figure 1-10-2

Quality of Service (QoS)

In QoS Mode, select QoS Disabled, 802.1p, or DSCP to configure the related parameters.

QoS Configuration

➤ Strict: Services the egress queues in sequential order, transmitting all traffic in the higher priority queues before servicing lower priority queues.

➤ WRR: Weighted Round-Robin shares bandwidth at the egress ports by using scheduling weights with default values of 1, 2, 4, 8 for queues 0 through 7, respectively. (This is the default selection.)

※Note: WRR can only be selected if Jumbo Frame mode is disabled on the Port Configuration page

Figure 1-11-1

QoS Mode: QoS Disabled

When the QoS Mode is set to QoS Disabled, the following table is displayed.

Figure 1-11-2

QoS Mode: 802.1p

Packets are prioritized using the 802.1p field in the VLAN tag. This field is three bits long, representing the values 0 - 7. When the QoS Mode is set to 802.1p, the 802.1p Configuration table appears, allowing you to map each of the eight 802.1p values to a local priority queue (low, normal, medium or high). The default settings are shown below.

When the QoS Mode is set to 802.1p, the 802.1p Configuration table is displayed as shown below.

QoS Configuration

Queue Mode	⊙ Strict ○ WRR
	Note : WRR is not supported in Jumbo Frame mode.
QoS Mode	802.1p ▼
Prioritize Traffic	Custom ▼

Custom
All Low Priority
All Normal Priority
All Medium Priority
All High Priority

802.1p Configu

802.1p Value	Priority	802.1p Value	Priority	802.1p Value	Priority	802.1p Value	Priority
0	normal ▼	1	low ▼	2	low ▼	3	normal ▼
4	medium ▼	5	medium ▼	6	high ▼	7	high ▼

APPLY   CANCEL

Figure 1-11-3

QoS Configuration

Queue Mode	⊙ Strict ○ WRR
	Note : WRR is not supported in Jumbo Frame mode.
QoS Mode	802.1p ▼
Prioritize Traffic	Custom ▼

802.1p Configuration

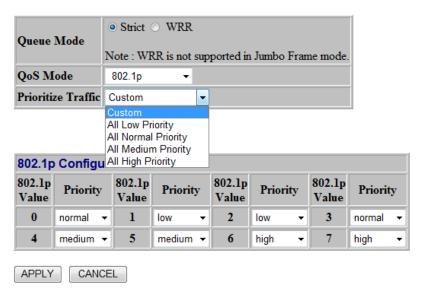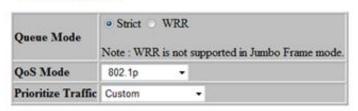| 802.1p Value	Priority	802.1p Value	Priority	802.1p Value	Priority	802.1p Value	Priority
0	medium ▼	1	low ▼	2	low ▼	3	normal ▼
4	medium ▼	5		6	high ▼	7	high ▼

low
normal
medium
high

APPLY   CANCEL

Figure 1-11-4

QoS Mode: DSCP

DSCP: Packets are prioritized using the DSCP (Differentiated Services Code Point) value. The Differentiated Services Code Point (DSCP) is a six-bit field that is contained within an IP (TCP or UDP) header. The six bits allow the DSCP field to take any value in the range 0 - 63. When QoS Mode is set to DSCP, the DSCP Configuration table is displayed, allowing you to map each of the DSCP values to a hardware output queue (low, normal, medium or high). The default settings map all DSCP values to the high priority egress queue. User can use the Prioritize Traffic drop-down list to quickly set the values in the

DSCP Configuration table to a common priority queue. Use Custom if you want to set each value individually.

When the QoS Mode is set to DSCP, the DSCP Configuration table is displayed as shown below.

Figure 1-11-5

Figure 1-11-6

PoE (Power over Ethernet) Configuration

Power over Ethernet (PoE) is an advanced technology providing a whole new application aspect for networking products. A series of PoE product is powering for wide range of devices, especially useful for VoIP phones, wireless LAN access points and IP cameras.

It is deployed in applications where AC power would be inconvenient, expensive or infeasible to supply. Web Smart features are able to remote control and centralized the power management. Via a current CAT 5 cable, power and data are able to travel though. Not only is it saving costs, but also it meets the demand of energy efficiency.

PoE Configuration

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

➢ PoE Enabled: POE of the port is able to supply power to the attached PD (Powered Device)
➢ PD Class: Detect the class of PD
➢ Delivering Power (W): Output power
➢ Current (mA): The status of the port current
➢ Voltage (V): The status of the port current
➢ Power Budget: Total PoE power has been used

PoE (Power over Ethernet) Configuration

Port	PoE Enabled	PD Class	Delivering Power [W]	Current [mA]	Voltage [V]	Power Budget [%] (total power = 65W)
1	✓	--	0	0	0	
2	✓	--	0	0	0	0
3	✓	--	0	0	0	
4	✓	--	0	0	0	

Apply   Refresh

Figure 1-12-1

Storm Control

Broadcast storms may occur when a device on your network is malfunctioning, or if application programs are not well designed or properly configured. If there is too much broadcast traffic on your network, performance can be severely degraded or everything can come to complete halt.

You can protect your network from broadcast storms by setting a threshold for broadcast traffic for each port. Any broadcast packets exceeding the specified threshold will then be dropped.

Storm Control Configuration

There are three type of traffic which can be rate limited, including broadcast multicast frame and Flooded Uncast Rate.

Storm Control Configuration

Storm Control Number of frames per second	
Broadcast Rate	No Limit ▾
Multicast Rate	No Limit ▾
Flooded unicast Rate	No Limit ▾

Figure 1-13-1

➢ Enable Rate Limit: Click the check box to enable storm control.

➢ Rate (number of frames per second): The Rate field is set by a single drop-down list. The same threshold is applied to every port on the switch. When the threshold is exceeded, packets are dropped, irrespective of the flow-control settings.

➢ Web: Click PORTS, Storm Control. This page enables you to set the broadcast storm control parameters for every port on the switch.

Storm Control Configuration

Storm Control Number of frames per second	
Broadcast Rate	9910 ▾
Multicast Rate	
Flooded unicast Rate	

Apply   Refresh

Drop-down list values:
1982
3964
5946
7928
9910
11892
13874
15856
17838
19820
21802
23874
25766
27748
29730
31712
No Limit

Figure 1-13-2

Monitoring

Statistic Overview

Statistic Overview for all ports

User can mirror traffic from any source port to a target port for real-time analysis the following figures shows clearly the statistics overview.

Clear Refresh

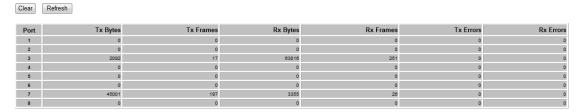| Port	Tx Bytes	Tx Frames	Rx Bytes	Rx Frames	Tx Errors	Rx Errors
1	0	0	0	0	0	0
2	0	0	0	0	0	0
3	2092	17	63016	251	0	0
4	0	0	0	0	0	0
5	0	0	0	0	0	0
6	0	0	0	0	0	0
7	45001	197	3355	26	0	0
8	0	0	0	0	0	0

Figure 2-1

Detailed Statics

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 High Priority Packets	-	Tx High Priority Packets	-
Rx Low Priority Packets	-	Tx Low Priority Packets	-
Rx Broadcast	-	Tx Broadcast	-
Rx Multicast	-	Tx Multicast	-
Rx Broad- and Multicast	0	Tx Broad- and Multicast	0
Rx Error Packets	0	Tx Error Packets	0
Receive Size Counters		**Transmit Size Counters**	
Rx 64 Bytes	-	Tx 64 Bytes	-
Rx 65-127 Bytes	-	Tx 65-127 Bytes	-
Rx 128-255 Bytes	-	Tx 128-255 Bytes	-
Rx 256-511 Bytes	-	Tx 256-511 Bytes	-
Rx 512-1023 Bytes	-	Tx 512-1023 Bytes	-
Rx 1024- Bytes	-	Tx 1024- Bytes	-
Receive Error Counters		**Transmit Error Counters**	
Rx CRC/Aligment	-	Tx Collisions	-
Rx Undersize	-	Tx Drops	-
Rx Oversize	-	Tx Overflow	-
Rx Fragments	-		
Rx Jabber	-		
Rx Drops	-		

Figure 2-2

LACP Status

LACP Aggregation Overview

LACP Aggregation Overview

Group/Port	1	2	3	4	5	6	7	8
Normal								

Legend

	Down	Port link down
0	Blocked	Port Blocked by RSTP. Number is Partner port number if other switch has LACP enabled
0	Learning	Port Learning by RSTP
	Forwarding	Port link up and forwarding frames
0	Forwarding	Port link up and forwarding by RSTP. Number is Partner port number if other switch has LACP enabled

Refresh

Figure 2-3-1

- Port: The port number.
- Port Active: Shows if the port is a member of an active LACP group.
- Partner Port Number: A list of the ports attached at the remote end of this LAG link member.
- Operational Port Key: Current operational value of the key used by this LAG.

LACP Port Status

LACP Port Status

Port	Protocol Active	Partner Port Number	Operational Port Key
1	no		
2	no		
3	no		
4	no		
5	no		
6	no		
7	no		
8	no		

Figure 2-3-2

RSTP Status

RSTP VLAN Bridge Overview

RSTP VLAN Bridge Overview

VLAN Id	Bridge Id	Hello Time	Max Age	Fwd Delay	Topology	Root Id
1	32769:00-0f-c9-05-bc-e0	2	20	15	Steady	This switch is Root!

Refresh

Figure 2-4-1

- Hello Time: Interval (in seconds) at which the root device transmits a configuration message.
- Max Age: The maximum time (in seconds) a device can wait without receiving a configuration message before attempting to reconfigure. All device ports (except for designated ports) should receive configuration messages at regular intervals. Any port that age out STA information (provided in the last configuration message) becomes the designated port for the attached LAN. If it is a root port, a new root port is selected from among the device ports attached to the network.

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➢ Fwd Delay: The maximum time (in seconds) the root device will wait before changing states (i.e., discarding to learning to forwarding). This delay is required because every device must receive information about topology changes before it starts to forward frames. In addition, each port needs time to listen for conflicting information that would make it return to a discarding state; otherwise, temporary data loops might result.

➢ Topology: Indicates if spanning tree topology is steady or undergoing reconfiguration. (The time required for reconfiguration is extremely short, so no values other that "steady" state are likely to be seen in this field.)

➢ Root ID : The priority and MAC address of the device in the Spanning Tree that this switch has accepted as the root device, and the port connected to the root device.

RSTP Port Status

RSTP Port Status

Port/Group	Vlan Id	Path Cost	Edge Port	P2p Port	Protocol	Port State
Port 1						Non-STP
Port 2						Non-STP
Port 3						Non-STP
Port 4						Non-STP
Port 5						Non-STP
Port 6						Non-STP
Port 7						Non-STP
Port 8						Non-STP

Figure 2-4-2

➢ Port/Group: The number of a port or the ID of a static trunk.

➢ Path Cost: The cost for a packet to travel from this port to the root in the current Spanning Tree configuration. The slower the media, the higher the cost.

➢ Edge Port: Shows if this port is functioning as an edge port, either through

➢ manual selection (see the RSTP Port Configuration table) or auto-detection. Note that if the switch detects another bridge connected to this port, the manual setting for Edge Port will be overridden, and the port will instead function as a point-to-point connection.

➢ P2P Port: Shows if this port is functioning as a Point-to-Point connection to exactly one other bridge. The switch can automatically determine if the interface is attached to a point-to-point link or to shared media. If shared media is detected, the switch will assume that it is connected to two or more bridges.

➢ Protocol: Shows the spanning tree protocol functioning on this port, either RSTP or STP (that is, STP-compatible mode).

IGMP Status

IGMP Status

IGMP Status shows the IGMP Snooping statistics for the whole switch.

➢ VLAN ID: VLAN ID number.
➢ Querier: Show whether Querying is enabled.
➢ Queries transmitted: Show the number of transmitted Query packets.
➢ Queries received: Show the number of received Query packets.
➢ v1 Reports: Show the number of received v1 Report packets.
➢ v2 Reports: Show the number of received v2 Report packets.
➢ v3 Reports: Show the number of received v2 Report packets.
➢ v3 Leave: Show the number of v3 leave packets received.

IGMP Status

VLAN ID	Querier	Queries transmitted	Queries received	v1 Reports	v2 Reports	v3 Reports	v2 Leaves
1	Idle	0	0	0	0	0	0

Refresh

Figure 2-5

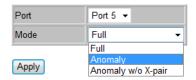**VeriPHY**

VeriPHY Cable Diagnostics

User can perform cable diagnostics for all ports or selected ports to diagnose any cable faults (short, open etc..) and feedback a distance to the fault.

➢ Cable Diagnostics: Cable diagnostics is performed on a per-port basis. Select the port number from the drop-down list.
➢ Cable Status: Shows the cable length, operating conditions and isolates a variety of common faults that can occur on Category 5 twisted pair cabling.
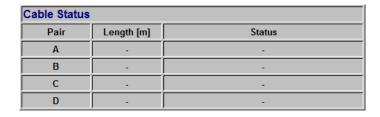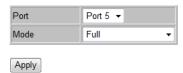
VeriPHY Cable Diagnostics

Port	Port 5 ▾
Mode	Full ▾

Full
Anomaly
Anomaly w/o X-pair

Apply

Cable Status

Pair	Length [m]	Status
A	-	-
B	-	-
C	-	-
D	-	-

Figure 2-6-1

VeriPHY Cable Diagnostics

Port	Port 5 ▾
Mode	Full ▾

Apply

Cable Status

Pair	Length [m]	Status
A	0	Abnormal termination
B	0	Abnormal termination
C	0	Abnormal termination
D	0	Open

Figure 2-6-2

VeriPHY Cable Diagnostics

Port	Port 5 ▾
Mode	Anomaly w/o X-pair ▾

Apply

Cable Status

Pair	Length [m]	Status
A	0	Abnormal termination
B	0	Abnormal termination
C	0	Abnormal termination
D	0	Open

Figure 2-6-3

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VeriPHY Cable Diagnostics

Port	Port 1 ▾
Mode	▾

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

[Apply]

Cable Status

Pair	Length [m]	Status
A	-	-
B	-	-
C	-	-
D	-	-

Figure 2-6-4

Ping

This command sends ICMP echo request packets to another node on the network.

Ping Parameters

➢ Target IP Address: IP address of the host
➢ Count: Number of packets to send. (Range: 1-20)
➢ Time Out: setting the time period of host will be Ping

Use the ping command to see if another site on the network can be reached. The following are some results of the **ping** command:

➢ Normal response: The normal response occurs in one to ten seconds, depending on network traffic.

➢ Destination does not respond: If the host does not respond, a "timeout" appears in ten seconds.

➢ Destination unreachable: The gateway for this destination indicates that the destination is unreachable.

➢ Network or host unreachable: The gateway found no corresponding entry in the route table.
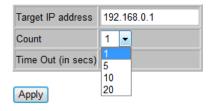
Press <Esc> to stop pinging.

Ping Parameters

Target IP address	
Count	1 ▾
Time Out (in secs)	1 ▾

[Apply]

Ping Results

Target IP address	0.0.0.0
Status	Test complete
Received replies	0
Request timeouts	0
Average Response Time (in ms)	0

[Refresh]

Figure 2-7-1

Ping Parameters

Target IP address	192.168.0.1
Count	1 ▾
Time Out (in secs)	1
	5
	10
	20

[Apply]

Ping Results

Target IP address	192.168.0.1
Status	Test starting...
Received replies	0
Request timeouts	0
Average Response Time (in ms)	0

[Refresh]

Figure 2-7-2

Ping Parameters

Target IP address	192.168.0.1
Count	1 ▾
Time Out (in secs)	1 ▾

1
5
10
30

Apply

Ping Results

Target IP address	192.168.0.1
Status	Test starting…
Received replies	0
Request timeouts	0
Average Response Time (in ms)	0

Refresh

Figure 2-7-3

Maintenance

Warm Restart

Press Yes button to restart the switch, the reset will be complete when the power lights stop blinking.

Warm Restart

Are you sure you want to perform a Warm Restart? Yes No

Figure3-1

Factory Default

This function is to force the switch back to the original factory settings. To reset the switch, select "Reset to Factory Defaults" from the drop-down list and click Apply. The LAN IP Address, Subnet Mask and Gateway IP Address will be reset to their factory

Software Upload

瀏覽…

Upload
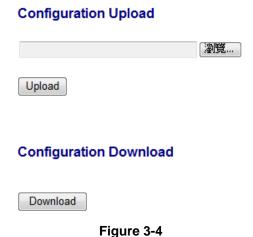
Figure 3-2

Software upload

Select "Upgrade Firmware" from the Tools drop-down list then click on the "Browse" button to select the firmware file. Click the APPLY button to upgrade the selected switch firmware file. User can download firmware files for user's switch from the Support section of your local supplier.

Software Upload

瀏覽...

Upload

Figure 3-3

Configuration File Transfer

Configuration file transfer allows you to save the switch's current configuration or restore a previously saved configuration back to the device. Configuration files can be saved to any location on the web management station. "Upload" the configuration file to save a configuration or "Download" to restore a configuration. Use the Browse button to choose a file location on the web management station, or to find a saved configuration file.

Configuration Upload

瀏覽...

Upload

Configuration Download

Download

Figure 3-4

Logout

The administrator has write access for all parameters governing the onboard agent. User should therefore assign a new administrator password as soon as possible, and store it in a safe place.

Please enter password to login
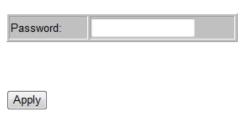
Password:	

Apply

Figure 3-5

Reset button for the factory default setting

Please take the following steps to reset the Web Smart Switch back to the original default:

Step 1:
Turn on the Web Smart Switch

Step 2:
Press and hold the reset button continuously for 5 seconds and release the reset button.

Step 3:
The switch will reboot for 20 seconds and the configuration of switch will back to the default setting.