

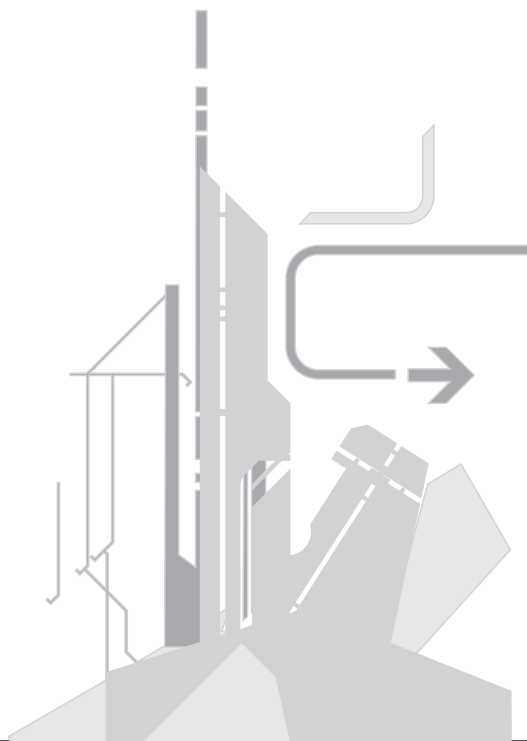


OT-2208SIW/UX

8 Ports 10/100M Advanced Version Smart Switch

User Manual

Ver.A0



Chapter 1 Product Specification

1.1 Product Characteristics

Thanks for your choice of 8 Ports 10/100Mbps Smart Ethernet Switch. A small and low cost switch with advanced function,such as port and tag VLAN, IGMP V2, and spanning tree. Please read the manual carefully before use.

1.2 Product Specifications

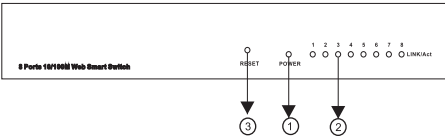
Standards	IEEE802.3, 802.3u
Basic Function	Wire-speed Performance MAC Address Auto-Learning and Auto-aging IEEE802.3x flow control for Full-Duplex Mode and backpressure for Half-Duplex Mode
Backbound Bandwidth	3.2Gbps
MAC Address Table	4k
Forwarding Rate	10BASE-T: 14880pps/port 100BASE-TX: 148800pps/port
Transmission Method	Store-and-Forward
Ports	8 10/100Mbps Auto-Negotiation RJ45 ports (Auto MDI/MDIX)
Network Media	10Base-T: UTP category 3, 4, 5 cable (maximum 100m) EIA/TIA-568 100Û STP (maximum 100m) 100Base-Tx: UTP category 5, 5e cable (maximum 100m) EIA/TIA-568 100Û STP (maximum 100m)
LED Indicators	Power, Link/Act
Dimensions (W*D*H)	175mm × 124.2mm × 29.8mm
Environment	Operating Temperature: 0℃~40℃ (32°F~104°F) Storage Temperature: -40℃~70℃ (-40°F~158°F) Operating Humidity: 10%~90% non-condensing Storage Humidity: 5%~90% non-condensing
Input	Power: External Power Adapter
Consumption	Max:8W

1.3 Package Contents

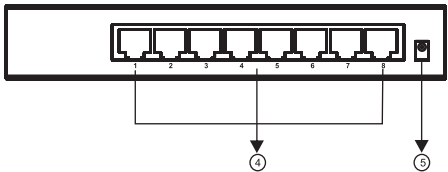
- 1 piece of 8-port Ethernet Switch
- 1 piece of external power adapter
- 4 pieces of rubber padding
- User's manual (or in CD disc)

1.4 Product outline

● Front panel



● Rear Panel



- ① Power Indicator ② Port Indicator ③ Reset Pushbutton
④ 8 RJ45 Ports ⑤ Power Plug

Chapter 2 Hardware Installation

2.1 Quick Installation Guide

Choose a proper place for the rack mountable switch, considering the surroundings such as power source, space, keep it away from strong sunlight, heat source, and electromagnetism interference.

Installation & Connection method:

- 1.Stick rubber paddings onto the bottom side of the switch.
- 2.Connect the switch to power source with offered power adapter, turn it on, the switch will test itself, all its indication lights are on at the same time, test is done when the lights go off .
- 3.Connect the switch to network devices, including Lan cards, switches etc. with Cat3,4,5 cable(Cat5 recommended); related indication lights flash when attached network devices are working. ALL ports support Uplink.

Note: Please not plug a phone line into a RJ45 port, otherwise it may cause damage.

2.2 LED Indications

LED	Status	Indication
Power	ON/OFF	Power on/off
Link/Act	ON/OFF	Ports connected/Ports unconnected
	Flash	Data frames running

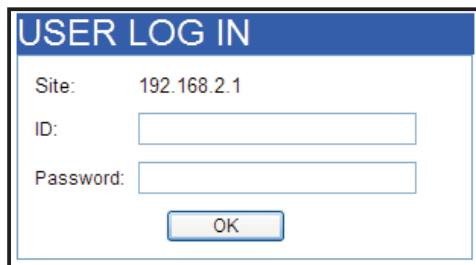
- After cables are connected, the indicator of a port does not work
 1. Check all the connection ports
 2. Check if the switch and network device are on, and both ends of the cable are properly connected.
 3. Check if right cables are used, and connectors are good.
 4. Check if max. transmission cable length within 100-meter.
- The indicator of power does not work
 1. Check the power is on, properly connected, and if voltage is stable.

Chapter 3 Configuration Guide

3.1 Fast Log on

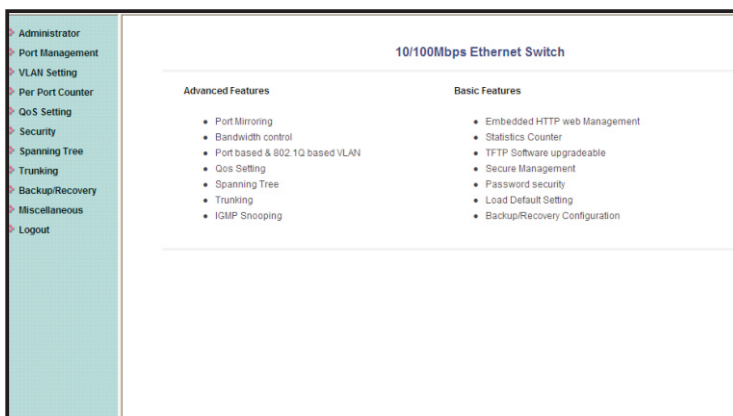
Notice: You may have to configure a new IP for a managing computer, because default switch IP is 192.168.2.1. You can log on as following steps:

1. Connect the switch with the managing computer Lan card;
2. Turn on the switch;
3. Make sure the managing computer IP address belongs to 192.168.2.2~254, e.g:192.168.2.100
4. Open IE browser , input http://192.168.2.1 and 'Enter', you will see login window as below:

A screenshot of a web-based login window titled "USER LOG IN" in a blue header bar. Below the header, there are three labels: "Site:" followed by the IP address "192.168.2.1", "ID:" followed by an empty text input field, and "Password:" followed by another empty text input field. At the bottom center of the form is a button labeled "OK".

USER LOG IN	
Site:	192.168.2.1
ID:	<input type="text"/>
Password:	<input type="password"/>
<input type="button" value="OK"/>	

5. Input User Name admin, Password system, and click“OK”, configuration window comes as below:

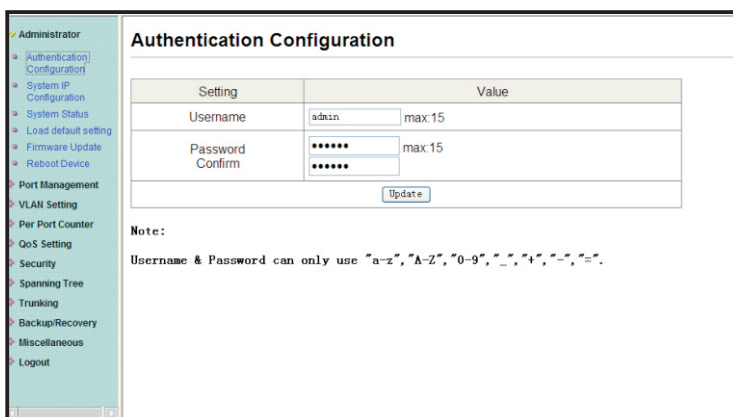


Remarks

1. One user is allowed to log on at one time.
2. Re-entry to the management Web interface is required if no action within 5 minutes.

3.2 Administrator

Here provides authentication/system IP configuration, system status, load default setting, firmware update and reboot device options.



3.3 Port Management

Here provides port configuration, port mirroring, bandwidth, broadcast storm control and port excluding options.

Administrator
Port Management
Port Configuration
Port Mirroring
Bandwidth Control
Broadcast Storm Control
Port Excluding
VLAN Setting
Per Port Counter
QoS Setting
Security
Spanning Tree
Trunking
Eoc Detection
Backup/Recovery
Miscellaneous
Logout

Port Configuration

Function	Auto	Speed	Duplex	Pause	Backpressure	Tx Capability	Addr. Learning
Select Port No.	01 <input type="checkbox"/>	02 <input type="checkbox"/>	03 <input type="checkbox"/>	04 <input type="checkbox"/>	05 <input type="checkbox"/>	06 <input type="checkbox"/>	07 <input type="checkbox"/> 08 <input type="checkbox"/>
<input type="button" value="Update"/>							

Port	Current Status					Setting Status					
	Link	Speed	Duplex	FlowCtrl	Auto-Nego	Speed	Duplex	Pause	Backpressure	Tx Cap	Addr. Learning
1	●	100M	Full	ON	Auto	100M	full	on	on	on	on
2	●	100M	Full	off	Auto	100M	full	on	on	on	on
3					Auto	100M	full	on	on	on	on
4					Auto	100M	full	on	on	on	on
5					Auto	100M	full	on	on	on	on
6					Auto	100M	full	on	on	on	on

Port mirror allows users to define a destination port and target ports, all packets through target ports will be copied and resent to the destination port, it helps users monitor without using bandwidth of target ports. packets

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Port Mirroring

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

Monitored Packets

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

Multi to Multi Sniffer function

3.4 VLAN Configuration

A VLAN is a group of ports designated by a switch those belong to a same broadcast domain.

This feature allows workgroups to be defined on the basis of their logical function, and need no recabling. It also enables you to configure port-based VLANs to for isolation- speedup traffic and increase security. VLAN also helps create limited broadcast domains, to prevent traffic from being forwarded to stations where it is not needed.

802.1Q VLAN and portt-based VLAN are available by clicking ' VLAN mode ' option. (Former VLAN configuration will be cancelled, if the switch VLAN mode is changed.)

3.5 Port Statistics

Here provides statistics of current forwarding and receiving data.

- Administrator
- Port Management
- VLAN Setting
- Per Port Counter
 - Port Counter
- QoS Setting
- Security
- Spanning Tree
- Trunking
- Eoc Detection
- Backup/Recovery
- Miscellaneous
- Logout

Counter Category

Counter Mode Selection: Transmit Packet & Collision Count ▼
Note:The counter will be cleared when you change the counter mode.

Port	Transmit Packet	Collision Count
01	6495	1
02	10952	0
03	2518	0
04	89	0
05	580	0
06	0	0
07	3532	0
08	0	0

Refresh Clear

3.6 QoS Setting

- Administrator
- Port Management
- VLAN Setting
- Per Port Counter
- QoS Setting
 - Priority Mode
 - Class of Service
- Security
- Spanning Tree
- Trunking
- Backup/Recovery
- Miscellaneous
- Logout

Priority Mode

☒ First-In-First-Out
☐ All-High-before-Low(Strict Priority): All packets will be assigned to either Q2(high) priority queue or Q1(low) priority queue.
☐ 4 Queue WRR => Q1: 8 Q2: 8 Q3: 8 Q4: 8 Update

- Administrator
- Port Management
- VLAN Setting
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- QoS Setting
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 - Class of Service
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Class of Service

The switch treats TCP/UDP, IP TOS/DS, 802.1p and physical port CoS scheme in the following priority.
TCP/UDP > IP TOS/DS > 802.1p > Physical port.
This means TCP/UDP CoS will override all other settings.

(1) TCP/UDP port

Note:
(1) Q1 ~ Q4 options are effective for the selected physical port only.
(2) "Drop" option is the global setting for all physical ports.

Protocol		
FTP		Q1 ▼
SSH		Q1 ▼
TELNET		Q1 ▼
SMTP		Q1 ▼
DNS		Q1 ▼
TFTP		Q1 ▼
HTTP		Q1 ▼
POP3		Q1 ▼
NEWS		Q1 ▼
SNT		Q1 ▼
NetBIOS		Q1 ▼

3.7 Security Setting

1. Mac Address Binding(3 addresses)

2. TCP_UDP Port Filtering

-disable- Data complies with chosen protocols is filtered, the other is forwarded.

-enable- Data complies with chosen protocols is forwarded, the other is filtered.

Port No	MAC Address
1	ff ff ff ff ff ff

Select Port Binding

Port No	Filter Status	Port No	Filter Status
1	Disable	9	Disable
2	Disable	10	Disable
3	Disable	11	Disable
4	Disable	12	Disable
5	Disable	13	Disable
6	Disable	14	Disable
7	Disable	15	Disable

Secure Port

Function Enable

Port Filtering Rule

"Deny" means the outgoing packets to the selected port with selected protocols and other protocols will be forwarded. "Allow" means the selected protocol will be forwarded and other protocols will be filtered.

Note:

1. The secure WAN port should be set at the physical port which is connected.
2. Once this function is enabled, the switch will check the destination TCP/UDP port. If the condition matches, this packet will be dropped or forwarded.

Secure Port

☐ Port01 ☐ Port02 ☐ Port03 ☐ Port04 ☐ Port05 ☐ Port06 ☐ Port07

Protocol

☐ FTP ☐ SSH ☐ TELNET ☐ DNS ☐ TFTP ☐ HTTP ☐ NEWS ☐ SNMP ☐ NetBIOS ☐ XPP

3.8 Spanning Tree

Spanning Tree Protocol (STP) is an industry standard that prevents loops networks. The Spanning Tree algorithm creates a single path through network by making sure that only one path is used when there are more than one path exists among a network. It also permits multiple links to remain active in a transmission conjunction. The IEEE 802.1d Spanning Tree Protocol supports redundant backbone connection and loop-free networks.

Administrator
Port Management
VLAN Setting
Per Port Counter
QoS Setting
Security
Spanning Tree
STP Bridge Settings
STP Port Settings
Loopback Detection
Trunking
Eoc Detection
Backup/Recovery
Miscellaneous
Logout

STP Bridge Settings

Spanning Tree Settings				
STP Mode	Bridge Priority	Hello Time	Max Age	Forward Delay
	(0~61440)	(1~10 Sec)	(6~40 Sec)	(4~30 Sec)
<input type="button" value="Submit"/>				

Note: $2 * (\text{Forward Delay} - 1) \geq \text{Max Age}$
 $\text{Max Age} \geq 2 * (\text{Hello Time} + 1)$

Note: If you enable the MAC address binding function, the address learning function will be disabled automatically. Then both RSTP/STP and address learning will be affected.

Bridge Status				
STP Mode	Bridge ID	Hello Time	Max Age	Forward Delay
RSTP	5120:10 F0 13 F0 18 26	15	128	128

The spanning tree feature is enabled in default.

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QoS Setting
Security
Spanning Tree
STP Bridge Settings
STP Port Settings
Loopback Detection
Trunking
Eoc Detection
Backup/Recovery
Miscellaneous
Logout

STP Port Settings

Port No.	Priority	RPC
	(0~240)	(1~200000000)
		0=AUTO
<input type="button" value="Submit"/>		

STP Port Status						
Port No.	RPC	Priority	State	Status	Designated Bridge	Designated Port
1	4294967295	0x80	Designated Port	Forwarding	---	---
2	4294967295	0x80	Designated Port	Forwarding	---	---
3	4294967295	0x80	---	Disable	---	---
4	4294967295	0x80	---	Disable	---	---

Administrator
Port Management
VLAN Setting
Per Port Counter
QoS Setting
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Spanning Tree
STP Bridge Settings
STP Port Settings
Loopback Detection
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Eoc Detection
Backup/Recovery
Miscellaneous
Logout

Eoc Detection Settings

Loopback Detect Function	Disable
Auto Wake Up	Disable
Wake-Up Time Interval	5 sec
<input type="button" value="Submit"/>	

Port No.	Status
1	---
2	---
3	---
4	---
5	---
6	---
7	---
8	---

3.9 Trunking Configuration

Administrator
Port Management
VLAN Setting
Per Port Counter
QoS Setting
Security
Spanning Tree
Trunking
Link Aggregation Settings
Backup/Recovery
Miscellaneous
Logout

Trunking

System Priority

1 (1~65535)

Link Aggregation Algorithm

MAC Srocdet

Submit

Notice: If any trunk group is set to LACP type, each port in the trunk group will not be enabled(can't Forward/Receive) until the port can finish LACP procedure with its link partner port.

Refresh

	Link Group 1				Link Group 2			
Member	P1	P2	P3	P4	P5	P6	P7	P8
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	---	---	---	---	---	---	---	---
State	Disable				Disable			
Type	LACP				LACP			
Operation Key	1 (1~65535)				2 (1~65535)			
Time Out	Short Time Out				Short Time Out			
Activity	Passive				Passive			

3.10 Eoc Detection Settings

Administrator
Port Management
VLAN Setting
Per Port Counter
QoS Setting
Security
Spanning Tree
Trunking
Eoc Detection
Eoc Detection Settings
Backup/Recovery
Miscellaneous
Logout

Eoc Detection Settings

Eoc Detection Function

Disable

Submit

Port No.	Status
1	---
2	---
3	---
4	---
5	---
6	---
7	---
8	---

3.11 Configuration backup/recovery

Administrator
Port Management
VLAN Setting
Per Port Counter
QoS Setting
Security
Spanning Tree
Trunking
Backup/Recovery
Configuration Backup/Recovery
Miscellaneous
Logout

Configuration Backup/Recovery

Backup(Switch-->PC)

Please check "Download" to download EEPROM contents.

Download

Recovery(PC-->Switch)

Select the image file :

Password:

3.12 Other configuration

Here provides Miscellaneous setting, including aging time, VLAN striding, IGMP snooping and VLAN uplink settings.

<div>Administrator</div> <div>Port Management</div> <div>VLAN Setting</div> <div>Per Port Counter</div> <div>QoS Setting</div> <div>Security</div> <div>Spanning Tree</div> <div>Trunking</div> <div>Backup/Recovery</div> <div>Miscellaneous</div> <div>Logout</div>	Miscellaneous Setting							
	Output Queue Aging Time							
	Aging time Disable	The output queue aging function allows the administrator to select the aging time of a packet stored in the output queue. A packet stored in the output queue for a long time will lower the free packet buffer, resulting in the poor utilization of the buffer and the poor switch performance.						
	VLAN Striding							
	VLAN Striding Disable	When this function is enabled, the switch will forward a uni-cast packet to the destination port. No matter whether the destination port is in the same VLAN group.						
	IGMP Snooping V1 & V2							
	IGMP Snooping Disable	IGMP Snooping V1 & V2 function enable						
	VLAN Uplink Setting							
	Port 01 Uplink1 Uplink2	Port 02 Uplink1 Uplink2	Port 03 Uplink1 Uplink2	Port 04 Uplink1 Uplink2	Port 05 Uplink1 Uplink2	Port 06 Uplink1 Uplink2	Port 07 Uplink1 Uplink2	Port 08 Uplink1 Uplink2
	Port 09 Uplink1	Port 10 Uplink1	Port 11 Uplink1	Port 12 Uplink1	Port 13 Uplink1	Port 14 Uplink1	Port 15 Uplink1	Port 16 Uplink1

Chapter 4 Maintenance & Troubleshooting

4.1 Password Lost

1. Press Reset button of the switch for 5-10 seconds to recover to factory default setting;
2. Use default User ' admin ' and Password ' system ' to log on to web interfaces.

4.2 Power system failure

Power indicator is on when the switch works. Check following, if the Power indicator is off.

1. Correct connection
2. Required power supply for the switch is used.

4.3 Unable to access to WEB interfaces

Check following, if unable to access to WEB interfaces.

1. Whether more than one administrators are logging on to WEB interface at the time.
Please try it again later
2. Whether cable connection is correct, or the port is prohibited by administration.
3. Whether the port belongs to VLAN of administration;
4. Whether the computer IP is in the same subnet with switch IP in a local network, or access by a router device for remote administration.
5. To check connection between the computer and switch by MS-DOS ping command, using 192.168.2.1 in default.