

Industrial

Managed Switch User Manual



Industrial PoE Switches
TP-SW8GAT/24-SFP
&
TP-SW8GAT/BT/24-SFP



Overview

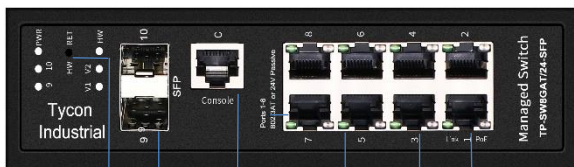
Tycon's Industrial managed PoE switch series features industrial performance, which can operate in severe working environments. With multiple PoE port configurations, settable in the console or web based user interface, the switches are suitable for many different industrial applications. Featuring an advanced management interface, the switches provide for comprehensive security, easy ring network application, QoS strategy and rich VLAN functionality. The switches are easy to manage and maintain which makes them suitable for complex, high density environments such as in factories, mines, industry automation, broadband systems, security applications, transportation, infrastructure, port and farmlands. In addition to the High-power PoE power supply and intelligent management functions, the unique ability to supply 802.3AT (35W), 802.3BT(90W), Passive 24V PoE from the same 8 port switch provides unsurpassed flexibility.

Features

- ◆ Unique industrial management interface, achieving high-efficiency network management.
- ◆ Lightning protection: up to 6KV.
- ◆ ESD static protection: up to 8KV.
- ◆ Supports Industrial temperature range: -40℃~80℃;
- ◆ Supports Industrial humidity range: 10%~90% RH non-condensing.
- ◆ 802.3at (bt) or 24V Passive PoE Output (Configurable in user interface).
- ◆ 802.3bt power supply up to 90W.
- ◆ Dual voltage inputs for primary and backup power sources.
- ◆ Wide input voltage range: 12-37VDC(Switch Only) / 37-57VDC(PoE Enabled).
- ◆ Unique one button ring network creation.
- ◆ Unique advanced PoE watchdog function.

Display & Description

Industrial 8GE PoE+2SFP, 8*10/100/1000M PoE ports + 2*1000M SFP ports

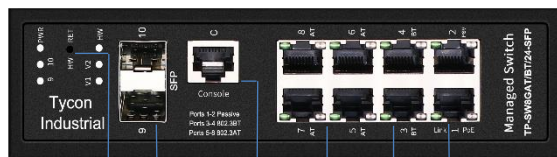


Ring Network
Button

SFP

Console
Port

PoE Port 1~8 (802.3at or 24V)



Ring Network
Button

SFP

Console
Port

PoE Port 5~8(AT)
PoE Port 3~4(BT)
PoE Port 1~2(PASV)

Item	PoE Port
TP-SW8GAT/24-SFP	PoE 1~8 (802.3at or 24V Passive)
TP-SW8GAT/24-SFP	Port 1-2 (24V Passive), Port 3-4 (802.3bt), Port 5-8 (802.3at)



Alarm Output

Reset Key

Temperature and Humidity Detector
Input Interface

Alarm
Input

Alarm
Input

Power Input (Secondary DC+)

Power Input (Secondary DC-)

Power Input (Primary DC+)

Power Input (Primary DC-)



Indicators

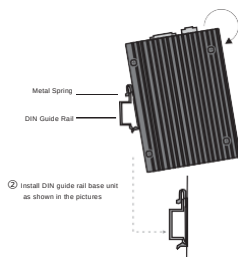
Indicator (Front)			Status	Description
PWR: Power/system LED			Always ON	System loading(<30S) / System crashed(>30S)
			Always OFF	Power Disconnected
			Flashing (1Sec Interval)	System normal operation
Port Link Indicator		Link-Green	Flashing ON	Port is connected and passing data
			Always OFF	Network signal not communicated
TP-SW8GAT/24-SFP	PoE Port Indicator (Port 1~8)	PoE	Always ON	24V Passive PoE is configured
			Always OFF	PoE is OFF
			Always ON	48V PoE is configured (802.3af/at)
			Always OFF	PoE is OFF
TP-SW8GAT/BT/24-SFP	PoE Port Indicator (Port 1~2)	PoE	Always ON	24V Passive PoE is configured
			Always OFF	PoE is OFF
			Always ON	48V PoE is configured (802.3af/at)
			Always OFF	PoE is OFF
	PoE Port Indicator (Port 3~8)	PoE-Green	Always ON	PoE Detection is successful and PoE is ON
			Always OFF	PoE is OFF

Function Indicators	Status	Description	Function Indicators	Status	Description
HW: Ring network LED	Always ON	Ring network active	9~10 SFP LED	Always ON	SFP connected
	Always OFF	Ring network not active		Always OFF	SFP not connected or abnormal
V1 Primary power LED	Always ON	Primary power is normal and is master power	V2: Secondary power LED	Always ON	Secondary power is normal and is master power
	Always OFF	No primary power input		Always OFF	No secondary power input
	Flash (1/4s)	Power and voltage abnormal		Flash (1/4s)	Power and voltage abnormal
	Flash (1s)	Primary power is normal and is backup power		Flash (1s)	Secondary power is normal and is backup power

Installation

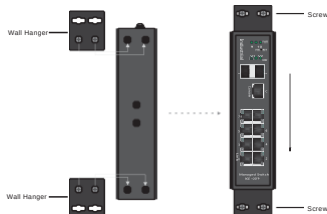
DIN Guide Rail

- ① Insert the top of DIN guide rail into the groove at the bottom of rigid metallic spring.



Wall-mounting

- ① Install the wall hangers onto the switch. ② Secure the switch length onto the wall by using screws.



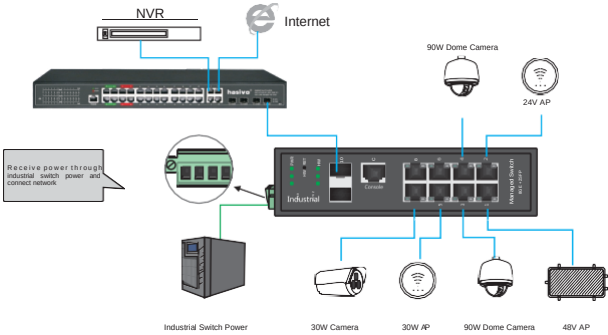
Attentions

- Please read the user manual before using the switch, or improper operation could cause damage to switch components.
- Do not use it near a fire source.
- Do not submerge it into water or allow water to wet the inner switch components.
- Do not short circuit the positive and negative poles of the various connections as this may damage the switch.
- Do not open the enclosure or disassemble inner components. You will void the warranty.

Product List

► 1*Switch	► 1*User Manual +Warranty Card	► Wall hangers +guide rail	► Temperature/humidity sensor
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1. Typical PoE Network Application - 24V/48V PoE and High Power
90W PoE maximum supported.



Hardware Parameter

Model	TP-SW8GAT/24-SFP & TP-SW8GAT/BT/24-SFP		
Product	Industrial 8+2 Managed PoE Switch		
Console Port	38400 Baud, 8 Bit, N parity, 1 stop bit, N flow control		
Reset Button	Press for <1sec to reset the switch, press for >5sec to reset to factory defaults		
PoE Ports	TP-SW8GAT/24-SFP 8*10/100/1000M Port 1~8 supports 24V Passive PoE or 802.3at PoE (MAX 30W per port)		
	TP-SW8GAT/BT/24-SFP 8*10/100/1000M Port 1~2 supports 24V Passive PoE or 802.3at PoE (MAX 30W per port) Port 3~4 supports 802.3bt PoE (MAX 90W per port) Port 5~8 supports 802.3at PoE (MAX 30W per port)		
Uplink Ports	2*10/100/1000M SFP		
Function Interface	1: HW RET Button for quick formation of ring network. Needs to be enabled in User Interface of master switch. 2: Dual independent power inputs with over/under voltage protection. 3: Alarm input with a range of 5-57VDC 0.5mA. Detects alarm input voltage changes. 4: Alarm/Relay output (<60V <3A), can define various custom condition triggers. 5: TMS Environmental temperature and humidity detection. 6: Real-time system of crucial voltage monitoring using alarm output function. 7: Real-time system temperature, environment temperature, humidity using alarm output function. 8: Real-time detection and display of input voltage, current, power. 9: Multiple custom port control and intelligent management.		
Network protocol	IEEE 802.3x IEEE 802.3, IEEE 802.3u, IEEE 802.3ab, IEEE 802.3z IEEE 802.3ad IEEE 802.3q, IEEE 802.3q/p IEEE 802.1w, IEEE 802.1d, IEEE 802.1S IEEE 802.3z 1000BASE-X STP (Spanning Tree Protocol) RSTP/MSTP (Rapid Spanning Tree Protocol) EPPS ring network protocol EAPS ring network protocol IEEE 802.3af, 802.3at, 802.3bt AUTO/24V Passive PoE PSE		
Environment Detection	TMS temperature and humidity sensor		
Port Specification	1-8 port 10/100/1000BaseT(X)auto detection, AUTO-MDI/MDI-X		
Transmission Mode	Store and Forward (full wire speed)		
Bandwidth	56Gbps		
Packet Forwarding	14.44Mpps		
MAC	8K		
Buffer	4.1M		
Transmission Distance	10BASE-T: Cat3,4,5 UTP (≤250 meter) 100BASE-TX: Cat5 or later UTP (≤100 meter) 1000BASE-TX: Cat6 or later UTP (≤1000 meter) 1000BASE-SX: 62.5μm/50μm MMF(2m~550m) 1000BASE-LX: 62.5μm/50μm MMF(2m~550m) or 10μm SMF(2m~5000m) BIDI supported		
FLASH	16M		
RAM	128M		
Power	Standby power consumption ≤5W Network full-load power consumption ≤15W Whole device full-load power consumption ≤360W		
LED Indicator	Port 9-10: (SFP LED) TP-SW8GAT/BT/24-SFP: PoE Port 1-2:(Green=48V; Orange=24V) TP-SW8GAT/24-SFP: PoE Port 1-8:(Green=48V; Orange=24V) Link port:(Green=Link LED) PWR:(Power/system LED), Flashing means Normal Power V1: (Master power LED) V2: (Slave power LED) HW:(Ring network ON LED)		
Power Input	Dual independent power inputs: Switch Only: 12-37VDC / PoE Enabled: 37-57VDC		
Operating Temp/Humidity	-40 ~+80°C, 10% ~90% RH Non-condensing		
Storage Temp/Humidity	-40 ~+85°C, 5% ~95% RH Non-condensing		
Lightning Protection Level	6KV 8/20us, 8KV ESD	Environmental Protection Level	IP40
Product Size(L*W*H)	160mm*130mm*45mm		



N.W(kg)	1kg
Installation	DIN rail or Wall Mount
Certificate	3C; CE mark, commercial; CE/LVD En60950; FCC Part 15 Class B; RoHS;
Warranty	3 Years

Software Parameter

Model	TP-SW8GAT/24-SFP & TP-SW8GAT/BT/24-SFP
Monitoring Platform	Quick formation of ring network with one button. System temperature monitoring and alarm. External temperature and humidity monitoring and alarm. Input power monitoring and alarm. System each channel key voltage monitoring and alarm. System total current, total power monitoring and alarm. All-Port network monitoring and alarm. Support one group input and output signal monitoring and alarm.
Network Protocol	IEEE 802.3x IEEE 802.3, IEEE 802.3u, IEEE 802.3ab, IEEE 802.3z IEEE 802.3ad IEEE 802.3q, IEEE 802.3q/p IEEE 802.1w, IEEE 802.1d, IEEE 802.1s, IEEE 802.1x
MAC	Support 16K MAC address, auto aging and learning
VLAN Configuration	Support port-based VLAN Up to 4096 VLANs; Support Voice VLAN, can configure Qos for voice data 802.1Q VLAN
Spanning Tree	STP (Spanning tree protocol); RSTP/MSTP (Rapid spanning tree protocol); EPPS/EAPS (Ring network protocol); 802.1x
Port Aggregation	Support 8 groups of aggregation, each group supports up to 8 ports
Port Mirroring	Support many-to-one port mirroring
Loop Guard	Support loop protection, real-time detection, quick alarm, concise location, Intelligent blocking, automatic recovery
Port Isolation	Support downlink ports isolated from each other and communicate with uplink port as well
Flow Control	Half duplex based on Back pressure; Full duplex based on PAUSE frame
Speed Limitation	Bandwidth management based on port input and output
Multicast Control	IGMPv1/2/3 and MLDv1/2 Snooping GMRP protocol registration; Multicast address management, multicast VLAN, multicast routing port, static multicast address
DHCP	DHCP Snooping
Storm Suppression	Supports unknown unicast, multicast, unknown multicast, broadcast type storm suppression; Storm suppression based on bandwidth adjustment and storm filtering
Security	Supports User port +IP address +MAC address; ACL based on IP, MAC; Support security properties of number of MAC address based on port
QOS	802.1p port queue priority algorithm; Cos/Tos, QOS remark; WRR (Weighted Round Robin), weighted priority rotation algorithm; WRR, SP, WFQ priority scheduling modes
Cable Sequence	Auto-MDIX; auto detection on straight-through and cross-over cable
System Maintenance	Upgrade package upload, System log viewing, WEB recovery factory configuration
PoE Function	8 Port PoE switch; Individual PoE port on/off recurring scheduling; Display of PoE Voltage, Current, Power; System total power display and configuration; PoE watchdog: supports auto reset when Port power fails or PD device become unresponsive; PoE configuration can be set to 802.3af, 802.3at or passive 24V; also 802.3bt on the BT model Indication of over-power
Network Management	WEB interface; CLI Command Line Interface based on Telnet, TFTP, Console; SNMP V1/V2/V3; RMON V1/V2