

## Managed Industrial BT/AT/PASV PoE Switch

### Features

- Industrial Strength (-30C to +65C Operating Temperature)
- 10/100/1000 Gigabit Ethernet and 2.5G Fiber
- 120/240VAC and 57VDC Redundant Power
- Ultimate Flexibility for Broadband and Security Integrators:
  - Port 1-4 802.3bt 90W or Passive 54V 30W PoE
  - Port 5-16 802.3at 30W or Passive 24V 15W PoE
  - Port 17-20 1.0/2.5Gb SFP Single/Multimode Fiber ports
- L3 Manageable via Console Port or IP or OOB Port
- Surge Protected Inputs, Thermostatically Controlled Cooling Fans
- Rack Mount, Wall Mount or Desktop
- RS485 Interface with 24VDC 0.25A Output
- Simplified User Interface with Advanced Mode



*TP-SW16GBT/AT/PSV-U  
Industrial PoE Switch*

### Applications

- Outdoor Network Installations
- Off-Grid Systems
- Cameras and Wireless Radios
- PoE Lighting Applications
- Factory Floor Networks

### Description:

The TP-SW16GBT/AT/PSV-U Power over Ethernet (PoE) 20 port Gigabit switches offered by Tycon® are fully automatic high speed Layer 3 Ethernet manageable switches. The switch has user defined PoE ports based on the following configurations:

- 4x 802.3BT 90W or 54V 30W Passive PoE ports
- 12x 802.3AT or 24V 15W Passive PoE ports
- 4x 1.0/2.5Gb SFP fiber ports

This feature enables powering different devices from the same PoE Switch. The SFP ports accept standard single mode or multimode fiber transceivers or RJ45 Transceivers to provide 4 additional Ethernet ports.

The switch has two power inputs and can be powered by 120/240AC or with 48-57VDC. DC power can be used as backup or primary power. Total PoE power output is 400W.

The PoE ports are manageable via the user interface or the console port. The switch features security protocols like SSH for secure access of the switch command interface. The command interface can be controlled via web browser, command line interface (CLI), TELNET, SSH or SNMP.

The switch supports PoE watchdog features which can detect and restart a connected device that stops working. The switch also supports Q-PoE (Quick PoE) to supply PoE power as soon as the switch is powered up instead of waiting for the switch to complete its boot sequence.

With L3 features, the switches provide better manageability, security, Quality of Service (QoS) features and performance. VLAN, Port Mirroring, Port Isolation, IGMP Snooping, LLDP, Storm Control, Access Control List (ACL) and PoE management are just some of the features available with this Industrial PoE Switch.

RIP, OSPF, DHCP, Spanning Tree, Jumbo Frames, Ring Topology are also supported.

The units are compatible with Category 5 or higher Ethernet cables with network distances up to 100m. The optical range for fiber ports is up to 120Km. The RJ45 connectors are shielded and grounded to the case. The units have surge protection on all ports. They have a wide operating temperature range for outdoor and industrial applications.

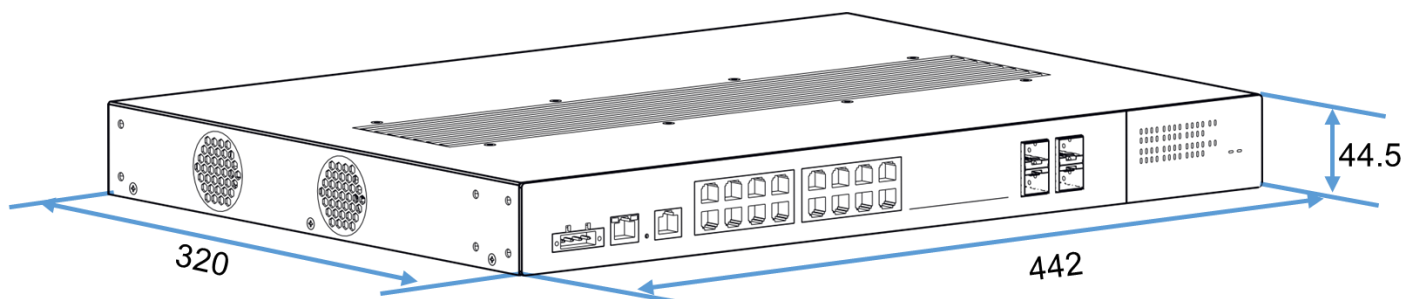
## Specifications:

	TP-SW16GBT/AT/PSV-U
<b>Ports</b>	Ports 1-4: Configurable as 802.3bt 90W or 54V 30W Passive PoE Ports 5-16: Configurable as 802.3af/at(30W) or 24V 15W Passive PoE Ports 17-20: SFP Transceivers Console Port (115200 Baud, 8 Bit, N parity, 1 stop bit, N flow control) Out of Band Management (OOB) port (RJ45 10/100Mbps) RS485 Serial Port DC Power Out (24VDC 0.25A)
<b>Ethernet Transmission Speed</b>	1000 Mbps (Gigabit) / 100 Mbps /10 Mbps Auto-negotiation
<b>Transceiver Compatibility</b>	1G/2.5G Multi Mode or Single Mode Fiber or RJ45
<b>Connections</b>	Shielded RJ45, Shielded SFP/LC, Grounded to Case
<b>AC Power Input</b>	100-240VAC 50/60Hz, Removeable IEC C13 Power Cord
<b>DC Power Input</b>	48 – 57VDC Wire Terminal (Max wire size 12AWG)
<b>Switch Total Power Output</b>	400W
<b>Self Consumption</b>	< 16 watts typical
<b>LED Indicators</b>	Led indicators for all ports on a central status display: 1x Red Power Indicator 16x Orange PoE Indicators 20x Green Link Indicators
<b>PoE Standards</b>	802.3af/at/bt and Passive PoE (PSE Endspan)
<b>PoE Protections</b>	Over Voltage, Over Current, Short Circuit
<b>PoE Pinout</b>	Ports 1-4: 802.3bt 3/6,4/5 (V+) ; 1/2,7/8(V-) Ports 5-16: 802.3at 1/2 (V+) ; 3/6(V-) All Ports Passive PoE: 4/5 (V+) ; 7/8 (V-)
<b>Reset/Init Button</b>	Momentary Press = reset; Long Press >5s = Initialize to factory defaults
<b>Surge Protection</b>	IEC61000-4-5, Data Port: +/- 6KV
<b>ESD Protection</b>	IEC61000-4-2, Level 3: 15KV Air, 8KV Touch
<b>Management Methods</b>	WEB, CLI, TELNET, SSH, SNMP

<b>VLANS</b>	Supports up to 4094 active VLANs simultaneously (out of 4096 VLAN IDs); 802.1Q tag-based VLAN; Port Based VLAN; Private VLAN (Protected Port);
<b>Port Management</b>	PoE enable/disable, PoE Mode control, Total PoE Power budget control, PoE Port priority, PoE port power limitation, PD alive check, PoE scheduling
<b>STP</b>	Standard Spanning Tree (STP) 802.1d, Rapid Spanning Tree (RSTP) 802.1w Multiple Spanning Tree (MSTP) 802.1s TC-BPDU Guard, BPDU Guard, BPDU Filter
<b>Ring Network Protocol</b>	ERPS (Ethernet Ring Protection Switching), <20ms G.8032 ERPS Ring
<b>Link Aggregation</b>	Static/Manual Aggregation, LACP Dynamic Convergence
<b>IGMP v1/v2 snooping</b>	IGMP limits bandwidth-intensive multicast traffic to only the requestors, Supports 256 multicast groups, MLD Snooping
<b>ACL (Access Control List)</b>	Based on Source MAC, Destination MAC, Protocol type, Source IP, Destination IP, L4 Port Number
<b>MAC Management</b>	Add/Delete, MAC Address learning limit, Dynamic Aging Time Setting
<b>QOS (Quality of Service)</b>	802.1p(COS), DSCP Classification, Supports SP/WRR Bandwidth Weights
<b>Other Functions</b>	LLDP, Basic Logging, SNMP Trap, Device Reset, Configuration save/restore, NTP time setting, Upgrade Management.
<b>Jumbo Frame Support</b>	9kB
<b>Switching Capacity</b>	40 Gbps / non-blocking
<b>Packet Forwarding Rate</b>	29.76 Mpps
<b>Forwarding Mode</b>	Store and Forward
<b>Memory</b>	240MB
<b>MAC Table</b>	16K MAC, self-learning
<b>Port Buffer</b>	1.5MB
<b>Network Protocols and Standards Summary</b>	IEEE 802.3i 10BASET, 802.3u 100BASET, 802.3z 1000BASET 802.3x Flow Control 802.3ab Gigabit Media Independent Interface (GMII) 802.1q VLANs, 802.1p (QOS) 802.3ad Link Aggregation Control Protocol (LACP) 802.3af /at /bt (PoE) IEEE G.8032 Ethernet ring protection (<20ms) (STP) 802.1d, (RSTP) 802.1w, (MSTP) 802.1s
<b>Other Industry Standards</b>	EMI: FCC Part 15, CISPR (EN55032) class A EMS: EN61000-4-2 (ESD), EN61000-4-4 (EFT), EN-61000-4-5 (Surge) Shock: IEC 60068-2-27, Free Fall: IEC 60068-2-32, Vibration: IEC 60068-2-6
<b>Environmental Protection</b>	IP20
<b>Operating Temp</b>	-30 to +65°C (-22 to 149°F)
<b>Operating Humidity (RH)</b>	5% - 95% (non-condensing)
<b>Storage Temperature</b>	-40 to +85°C (-40 to +185°F)
<b>Fan Noise</b>	25dBA Worst Case. Fan is thermostatically controlled and only used when needed.
<b>MTBF</b>	50,000 hours
<b>Certifications</b>	CE, FCC, RoHS
<b>Dimensions (LxWxH)</b>	442*320*44.5mm (17.4 x 12.6 x 1.75")
<b>Weight</b>	6.37kg (14 lbs.)

**Warranty**

3 Years

**System Ordering:****TP-SW16GBT/AT/PSV-U**

Industrial L3 Managed Gigabit PoE Switch with 4x 802.3bt(90W) / Passive 54V(30W),  
12x 802.3at(30W) / Passive 24V/15W Ports, 4 SFP

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