

20-port Gigabit Managed Industrial PoE Switch (TN3M20PGIPOESW) 250W/(AC100-240V)



OVERVIEW

The TN3M20PGIPOESW is a Gigabit managed industrial PoE switch independently developed by ONV. It has 16*10/100/1000Base-T adaptive RJ45 ports and 4*100/1000Base-X uplink SFP fiber ports. Port 1-16 can support IEEE 802.3 af/at PoE standard and the single-port PoE power reaches 30W. As a PoE power supply device, it can automatically detect and recognize power-compliant devices that meet the standard and supply power through the network cable. It can supply power to PoE terminal equipment such as wireless AP, IP camera, VoIP, and industrial sensors through the network cable, and meet the network environment that needs a high-density PoE power supply. It is suitable for intelligent transportation, rail transit, power industry, mining, petroleum, and industrial scenes such as shipping, metallurgy, and green energy construction forming a cost-effective, stable, and reliable communication network.

The TN3M20PGIPOESW has L2+ network management functions. It can support IPV4 management and static routing forwarding, complete security protection mechanisms, complete ACL/ QoS policies, and rich VLAN functions, making it easy to manage and maintain. Supports multiple network redundancy protocols RSTP (<50ms) to improve link backup and network reliability. When a one-way network fails, communication can be quickly restored to ensure uninterrupted communication of important transmissions. According to application needs,

PoE power supply management, port flow control, VLAN division, QoS, and other application service configurations can be performed through network management methods such as Web, CLI, SNMP, and Telnet.

FEATURE

Gigabit access

- Support non-blocking wire-speed forwarding.
- Support full-duplex based on IEEE 802.3x and half-duplex based on Backpressure.
- Support Gigabit RJ45 port and SFP port combination, which enables users to flexibly build networking to meet the needs of various scenarios..

SmartPoE powersupply

- Comply with IEEE 802.3 af/at PoE power supply standard, automatically identify PoE equipment for power supply.
- Support PoE network management function, port power status viewing, etc. through network management configuration.
- 16*10/100/1000Base-T RJ45 ports support PoE power, meeting the PoE power requirements of security monitoring, industrial automation systems, wireless coverage, and other scenarios.

Strong business processing capability

- Support IEEE 802.1Q VLAN.
- Ring network RSTP spanning tree protocol eliminates layer 2 loops and realizes link backup.
- Support IGMP Snooping V1/V2 to meet the needs of multi-terminal high-definition video surveillance and video conferencing access.
- Support QoS, three priority modes based on port, 802.1P-based and DSCP-based, and four queue scheduling algorithms: SP, WRR, and WFQ.
- Static aggregation and dynamic aggregation effectively increase link bandwidth, achieve load balancing, and link backup, and improve link reliability.
- Support ACL to filter data packets by configuring matching rules, processing operations, and time permissions to provide flexible security access control strategies.

Security

- Port isolation and storm control.
- 802.1X authentication provides authentication functions for LAN computers and controls the authorization status of controlled ports according to the authentication results..

Stable and reliable

- CCC, CE, FCC, RoHS.
- The user-friendly panel can show the device status through the LED indicator of PWR, Link, and PoE.
- Using self-developed power supply, redundant dual power supply provides long-term stable PoE power output.
- Low power consumption, with fan, galvanized steel housing, and excellent heat dissipation to ensure stable operation of the switch.

Easy O&M management

- CPU monitoring, memory monitoring, and Ping detection.
- System logs and port traffic statistics facilitate network optimization and transformation.
- LLDP facilitates the network management system to query and determine the communication status of the link.
- Web network management, CLI (Console, Telnet), SNMP (V1/V2/V3), Telnet, and other diversified management and maintenance methods.

TECHNICAL SPECIFICATION

Model	TN3M20PGIPOESW	TN3M20PGIPOESW
Interface Characteristics		
Fixed Port	2*AC100-240V input ports 1*RS232 Console port (115200, N, 8,1) 4*100/1000Base-X uplink SFP fiber ports (Data) 16*10/100/1000Base-T PoE ports (Data/Power) 2*DC48-57V input ports (Support reverse polarity protection)	
Ethernet Port	Port 1-16 can support 10/100/1000Base-T(X) auto-sensing, full/ half duplex MDI/ MDI-X self-adaption	
Twisted Pair Transmission	10BASE-T: Cat3,4,5 UTP (≤100 meters) 100BASE-TX: Cat5 or later UTP (≤100 meters) 1000BASE-T: Cat5e or later UTP (≤100 meters)	

Optical Fiber Port	Gigabit optical fiber port, default no include optical modules (optional single-mode/ multi-mode, single fiber/ dual fiber optical module. LC)	
Optical Cable/ Distance	Multi-mode: 850nm/ 0-550m, Single-mode: 1310nm/ 0-40km, 1550nm/ 0-120km.	
Chip Parameter		
Network Management Type	L2+	
Network Protocol	IEEE 802.3 10BASE-T, IEEE 802.3i 10Base-T, IEEE 802.3u 100Base-TX, IEEE 802.3ab 1000Base-T, IEEE 802.3z 1000Base-X, IEEE 802.3x	
Forwarding Mode	Store and Forward (Full Wire Speed)	
Switching Capacity	56Gbps (non-blocking)	
Forwarding Rate@64byte	29.76Mpps	
CPU	500M	
DRAM	1G	
FLASH	256M	
MAC	8K	
Buffer Memory	4.1M	
LED Indicator	Power: PWR (Yellow), System: SYS (Yellow), PoE: PoE (Green), Network: Link/Act (Yellow), Fiber port: L/A (Green)	
Reset Switch	Yes	
PoE& Power Supply		
PoE Port	Port 1-16	
PoE Management	Port PoE output on/off, Port PoE working status display	
Power Supply Pin	1/2(+)/3/6(-)	
Max Power Per Port	30W, IEEE 802.3 af/at	
Total PWR/ Input Voltage	250W/(AC100-240V)	400W/(AC100-240V)

Power Consumption	Standby<15W, Full Load<240W	Standby<18W, Full Load<380W
Power Supply	Built-in power supply, AC100~240V 50-60Hz, 4.1A	Built-in power supply, AC100~240V 50-60Hz, 4.8A
Power Input Port	Alarm switch port, 2*AC power input ports, 2*DC48-57V input ports Dual input power port: AC power supply priority to support anti-reverse connection protection, and automatically switches to DC connection when power fails.	
Physical Parameter		
Operation Temp/ Humidity	-40°C~+80°C, 5%~90% RH Non condensing	
Storage Temp/ Humidity	-40°C~+85°C, 5%~95% RH Non condensing	
Dimension (L*W*H)	440*378*44.5mm	
Net /Gross Weight	5.3kg/ 6.1kg	5.5kg/ 6.3kg
Installation	Desktop, 1U/19" cabinet	
Certification & Warranty		
Lightning Protection	IEC61000-4-3 (RS):10V/m (80~1000MHz) FCC Part 15/CISPR22 (EN55022): Class A IEC61000-6-2 (Common Industrial Standard) IEC61000-4-10 (Damped oscillation): 30A/m, 1MHz IEC61000-4-12/18 (Shockwave): CM 2.5kV, DM 1kV Protection level: IP30, Lightning protection: 6KV 8/20us IEC61000-4-4(EFT): Power cable:±4kV, Data cable: ±2kV IEC61000-4-16 (Common-mode transmission): 30V, 300V, 1s IEC61000-4-2 (ESD): ±8kV contact discharge, ±15kV air discharge IEC61000-4-6 (Radio frequency transmission): 10V (150kHz~80MHz) IEC61000-4-8 (Power frequency magnetic field): 100A/m, 1000A/m, 1s-3s IEC61000-4-5 (Surge): Power cable: CM±4kV/ DM±2kV, Data cable: ±4kV	
Warranty	3 years, lifelong maintenance.	