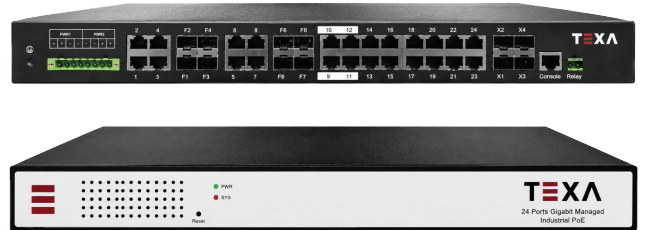


**24-Port PoE Gigabit L3 10G Uplink Industrial Switch
(TN3M24P10GUIPOESW)
48-56V DC**



OVERVIEW

TN3M24P10GUIPOESW is a 24-Port PoE Gigabit L3 10G Uplink Industrial Switch with 16 gigabit PoE RJ45 ports, 8 SFP combo ports, 4 10G SFP+ optical ports. Among them, four POE ports can provide up to 90W of power and are suitable for IEEE802.3af/at/bt compatible power receiving devices (PDs), especially suitable for scenarios where it is difficult

to provide AC power and require high wiring costs. EMC industrial level 4 protection performance; Corrugated high-strength aluminum profile shell, IP40 grade, low-power design, rack mounted, with a working temperature of -40 C -75 C, suitable for working in harsh environments; TN3M24P10GUIPOESW can also support rich network management functions: RUN Ring (Self healing time < 10ms), RSTP, VLAN, QoS, SNMPv1/v2c/v3, IEEE802.1X, SSH/SSL, port mirroring, port aggregation, and other rich redundancy, switching, and security management features make it a reliable solution for intelligent transportation, video surveillance, and other harsh industrial environments.

FEATURE

Port 6KV lightning protection

- All ports support 6KV lightning protection, PSE short circuit protection, PoE overload, power supply over temperature protection, over voltage protection, surge current protection and other protection features.

FEATURE

Powerful application capabilities

- Support 802.1Q VLAN, MAC VLAN, IP VLAN, users can divide VLAN flexibly as needed.
- Support QoS, 8 port queues, support port priority, 802.1P priority, DSCP priority, support SP, WRR, SP+WRR, WFQ priority scheduling algorithm.
- Support ACL, support L2 (Layer 2) ~ L4 (Layer 4) packet filtering function, provide flexible and secure access control policy.
- Supports IGMP v1/v2/v3 Snooping and MLD v1/v2 Snooping to meet the requirements of multi-terminal HD video surveillance or video conferencing.
- It supports the fast leave mechanism and querier of Layer 2 multicast, and supports Layer 2 IPv4 static multicast and Layer 2 IPv6 static multicast.
- Support RIP dynamic routing protocol, solve the routing problem after the small and medium-sized network is divided into subnets, and simplify the network configuration.
- Support static routing protocol, and manually configure routing entries to realize communication between different network segments. Support ARP configuration, so that hosts in different physical networks on the same network segment can communicate normally.

Full security mechanism

- Completed security authentication mechanism: It supports IEEE 802.1x, Radius, Tacacs+, etc.
- The loop detection mechanism can ensure the stable operation of the network for a long time.
- High security features such as port isolation in VLAN, DHCP-Snooping and IP+MAC+port binding, etc., to further ensure user data security.
- Support multi protections like ARP, IP source and DoS.
- Support declining user access by the port numbers, IP address, and MAC address.

Diverse reliability protection

- Support STP (IEEE 802.1d), RSTP (IEEE 802.1w) and MSTP (IEEE 802.1s) protocols to eliminate Layer 2 loops and implement link backup.
- Supports loop protection, root bridge protection, TC protection, BPDU protection, and BPDU filtering.
- Support relay alarm output functions such as power failure, port disconnection, and PoE power supply abnormality.
- EMC Class4 and anti-jamming capability.

Powerful POE

- Support 802.3af/at standard, built-in high-power power supply, meet the needs of POE scenarios such as CCTV, wireless coverage, and IP telephony.
- Support PoE power limit, and set the priority of PoE ports. When the power exceeds the limit, the high-priority ports have priority.
- Support setting the time period of PoE power supply, and users can adjust it according to the real needs.
- Support to check the status of PoE chip like temperature, output power and other parameters in real time through the web page.

Flexible and convenient management and maintenance

- Support various management methods such as Console, Telnet, and SSH.
- Support simple and efficient WEB management (HTTP, HTTPS, SSL V3)
- Support TFTP mode to upload and download files.
- Support SNMP V1/V2/V3
- Support Hored Apollo cloud platform, which can realize all-round remote operation and maintenance such as automatic device discovery, network topology management, and remote configuration management of devices.

Compliance

- EMI: FCC CFR47 Part 15, EN55022/CISPR22, Class A EMS:
 - IEC61000-4-2 (ESD): $\pm 8\text{kV}$ (contact), $\pm 15\text{kV}$ (air)
 - IEC61000-4-3 (RS): 10V/m (80MHz-2GHz)
 - IEC61000-4-4 (EFT): Power Port: $\pm 4\text{kV}$; Data Port: $\pm 2\text{kV}$
 - IEC61000-4-5 (Surge): Power Port: $\pm 2\text{kV/DM}$, $\pm 4\text{kV/CM}$; Data Port: $\pm 6\text{kV}$
 - IEC61000-4-6 (CS): 3V (10kHz- 150kHz); 10V (150kHz-80MHz)
 - IEC60068-2-6 (Vibration)
 - IEC60068-2-27 (Shock)
 - IEC60068-2-32 (Free Fall)

TECHNICAL SPECIFICATION

Hardware	
Network Interface	<ul style="list-style-type: none"> • 16*10/100/1000Mbps PoE RJ45 • 8*1000M SFP combo ports • 4*10G SFP+ ports • 1 Console port
Network Protocol	<ul style="list-style-type: none"> • IEEE802.3,IEEE802.3i,IEEE802.3u,IEEE802.3ab, IEEE802.3z,IEEE802.3ad,IEEE802.3x,IEEE802.3af/at, IEEE802.1p,IEEE802.1q,IEEE802.1w,IEEE802.1d, IEEE802.1s,IEEE 802.3af,IEEE 802.3at,IEEE 802.3bt
Performance	<ul style="list-style-type: none"> • Switching capacity: 128Gbps (Non-Block) • Forwarding rate: 95.2Mpps • MAC table: 16K • Packet buffer: 12Mb • Forwarding Type: Storage and Forwarding
LED Indicator	<ul style="list-style-type: none"> • Power Indicator: P1,P2 • System Indicator: SYS • Alarm Indicator: ALM • SFP Port Indicator: Link&Act F1~F4 • RJ45 Port Indicator: POE&Link&Act 1~24
POE Pin	<ul style="list-style-type: none"> • Port 9-12 1/2/4/5(+), 3/6/7/8(-); • Port 13-24 1/2(+), 3/6/(-);
Power Supply	<ul style="list-style-type: none"> • Input voltage: 48-56V DC • Input port: Pluggable 5 pin terminals block, 5.08mm pitch (support dual DC power source backup, built-in overcurrent protection, support anti-reverse connection) • No-load power:15W@52V DC • Full load power: 400W@52V DC (POE full load output) • Max. power for single port: 90W,9-12 port 90W,13-24 port 30W
Physical Parameter	<ul style="list-style-type: none"> • Casing: Corrugated high-strength metal housing, IP40 • Installation: Rack • Dimension (LxWxH) : 440mm×320mm×44mm
Environmental Condition	<ul style="list-style-type: none"> • Operating Temperature: -40~ 75°C • Storage Temperature: -40~ 85°C • Operating Humidity: 5%~95% RH (non-condensing) • Storage Humidity: 0%~95% RH (non-condensing)
Certification	<ul style="list-style-type: none"> • CE/ROHS/FCC

Software Specifications:

Protocol Standards	<p>IEEE 802.3:Ethernet media access control (MAC)</p> <p>IEEE 802.3i:10BASE-T Ethernet</p> <p>IEEE 802.3u:100BASE-TX Fast Ethernet</p> <p>IEEE 802.3ab:1000BASE-T Gigabit Ethernet</p> <p>IEEE 802.3z:1000BASE-X Gigabit Ethernet (optical fiber)</p> <p>IEEE 802.3ad:Standard method of link aggregation</p> <p>IEEE 802.3x:Flow control</p> <p>IEEE 802.1p:LAN layer 2 qos/cos protocol related to traffic priority (multicast filtering function)</p> <p>IEEE 802.1q:VLAN Bridge operation</p> <p>IEEE 802.1d:STP Spanning tree</p> <p>IEEE 802.1s:MSTP Spanning tree</p> <p>IEEE 802.1w:RSTP Spanning tree</p> <p>IEEE 802.3af/at/bt</p>
L3 Interface	<p>Support L3 interface</p> <p>Support IPV4,IPV6 addresses configuration</p> <p>Support ARP configuration</p> <p>Support ND configuration</p>
L3 Routing	<p>Support IPV4 static routing</p> <p>Support IPV4 RIP v1/v2</p> <p>Support IPV4 OSPFv2</p> <p>Support IPV6 static routing</p> <p>Support IPV6 RIPng</p> <p>Support IPV6 OSPFv3</p>

Software Specifications:	
VLAN	Support 4K VLAN Support 802.1Q VLAN,MAC VLAN ,IP VLAN, Voice VLAN
DHCP	Support DHCP server Support DHCP relay Support DHCP Snooping
MAC Table	Support IEEE 802.1d standard Support MAC addresses automatic learning and aging Support static, dynamic and filtered address tables
Security Features	Password guard Support restricting user access based on port number, IP address and MAC address Support HTTPS,SSL V3,TLS V1,SSH V1/V2 Support IP-MAC-PORT ternary binding Support ARP protection, IP source protection, DOS protection Support DHCP Snooping,DHCP Attack protection Support 802.1X certification,AAA Support Port security, port isolation Support CPU Protection function
POE	Support PoE power limit Support PoE chip status check Support setting PoE port priority Support setting PoE power supply time period Support intelligent power supply
ACL	Support L2(Layer 2) ~ L4(Layer 4) packet filtering function Support Port mirroring, flow speed restriction, QoS re marking
QoS	Support 8 port queues Support port priority, 802.1p priority, DSCP priority Support SP,WRR,SP+WRR,WFQ priority scheduling
STP	Support STP(IEEE 802.1d), RSTP(IEEE 802.1w) and MSTP(IEEE 802.1s) standard Support Loop protection, root bridge protection, TC protection, BPDU protection, BPDU filtering Support optical port 50ms switching

Software Specifications:

Multicast	<ul style="list-style-type: none"> Support IGMP v1/v2/v3 Snooping Support MLD v1/v2 Snooping Support Fast leave mechanism and querier of layer 2 multicast Support Layer 2 IPv4 static multicast Support Layer 2 IPv6 static multicast Support IGMP v1/v2/v3 layer 3 multicast
Storm Suppression	<ul style="list-style-type: none"> Support Multicast suppression Support Broadcast suppression Support Unknown unicast suppression
LACP	<ul style="list-style-type: none"> Support Static convergence Support Dynamic convergence Support based on IP, MAC and mixed load balancing mode Support 32 aggregation groups at most
IPv6	<ul style="list-style-type: none"> Support IPv6 Ping,IPv6 Tracert,IPv6 Telnet Support IPv6 SSH,IPv6 SSL
Network management	<ul style="list-style-type: none"> Support WEB management (HTTP,HTTPS,SSL V3) Support CLI (Telnet,SSH V1/V2,local serial port) Support SNMP V1/V2/V3 Support RMON V1/V2 Support LLDP device discovery Support NTP time synchronization Support DNS Client Support CPU Monitoring, memory monitoring Support System log, classification warning Support Ping,Tracert Detection, cable detection Support Apollo cloud platform one-stop management and maintenance