



TNS5800B-8P4GT-P24

Wall Mounting

12-Port Layer 3 Public Transportation ITxPT Industrial Ethernet Switch

- Complies with ITxPT
- Support power ignition, support power delay-off
- Support 8 100M PoE M12 interfaces and 4 gigabit M12 interfaces (with 2 groups of Bypass function)
- Adopt Ring patented technology, support single ring, coupling ring, chain, Dual-homing function
- Support 17~24VDC power supply inputs
- Support IP67 protection grade
- Support -40~75°C wide operating temperature range



Introduction

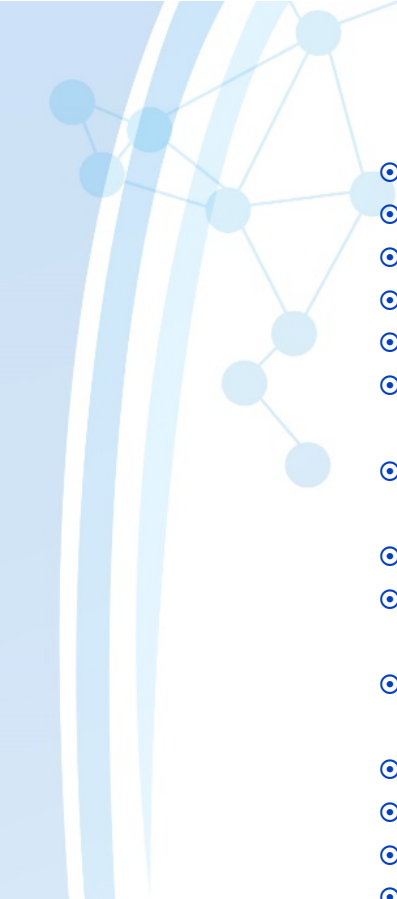
TNS5800B-8P4GT-P24 is a layer 3 industrial Ethernet switch. This product has passed the ITxPT certification, which is suitable for running in harsh environment and can ensure the reliability and efficiency of public transportation network. Ethernet interfaces use firm and reliable M12 connectors which can adapt to usage scenario with vibration and shock. PoE power supply conforms to IEEE802.3af/at protocol standard, and it can power device over Ethernet, thus decreasing the cable connection of powered devices. This product supports 24VDC power supply input and adopts wall mounting, which can meet the needs of different application sites.

The network management system supports various network protocols and industry standards, such as static routing, RIP, VRRP, NAT, STP/RSTP/MSTP, ERPS, 802.1Q VLAN, QoS function, DHCP Server, IGMP Snooping, LLDP, port trunking, port mirroring, etc. It also possesses complete management functions, support port configuration, port statistics, port IP binding, access control, 802.1X authentication, network diagnosis, rapid configuration, online upgrade, etc.; CLI, WEB, Telnet, SNMP, SSH and other access methods can be supported. Network management system could bring you great user experience through its friendly interface design and easy and convenient operation.

When port has link failure, ALARM indicator will be bright and send out alarm, meanwhile, alarm device connected to the relay will send out alarm for rapid scene troubleshooting. The hardware adopts fanless, low power consumption and wide temperature design, and the external heat sink provides extraordinary heat dissipation performance. These devices have passed rigorous industrial standard tests, which can suit for the industrial scene environment with harsh requirements for EMC. It can be widely used in Bus, Tram and other public transportation on-board systems, primarily used for electronic ticketing, passenger counting, passenger information, and video surveillance systems.

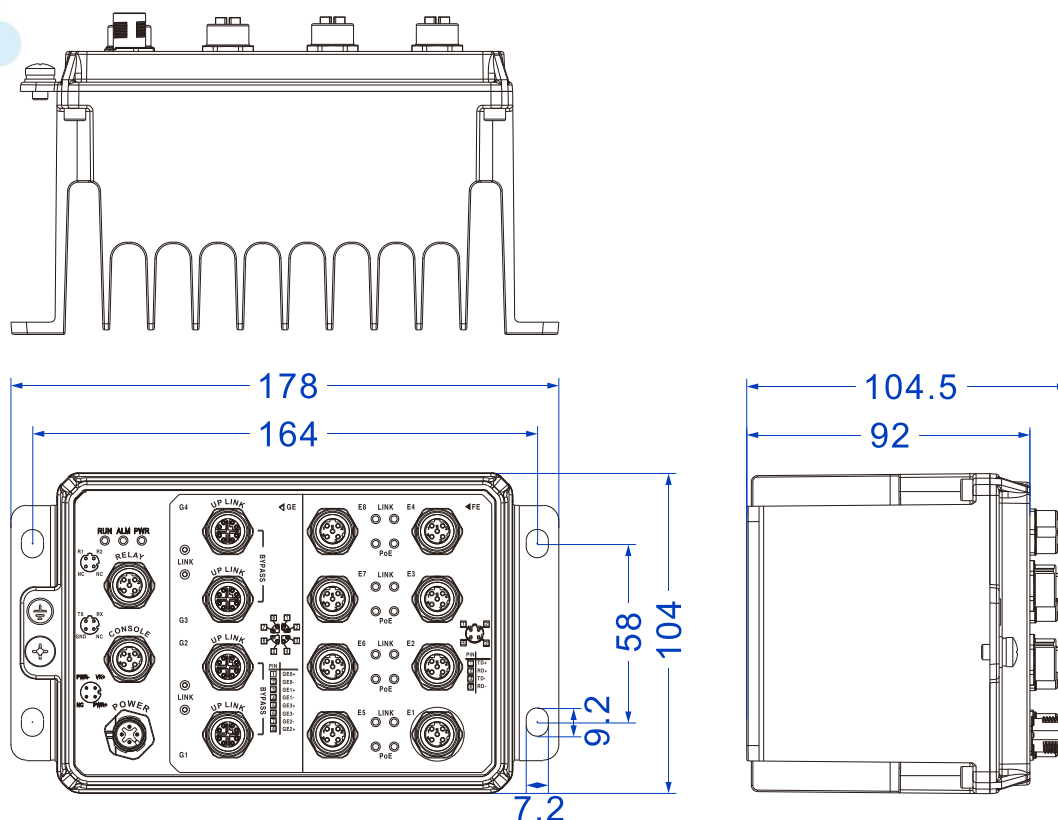
Features and Benefits

- ⊙ SNMPv1/v2c/v3 is used for network management of various levels
- ⊙ RMON can be used for efficient and flexible network monitoring
- ⊙ Port mirroring can conduct data analysis and monitoring, which is convenient for online debugging
- ⊙ QoS supports real-time traffic classification and priority setting
- ⊙ LLDP can achieve automatic topology discovery, which is convenient for visual management
- ⊙ DHCP server can be used for distributing IP address with different strategies
- ⊙ File management is convenient for the device rapid configuration and online upgrading
- ⊙ Port statistics can be used for the port real time traffic statistics
- ⊙ ARP could be used for MAC address resolution
- ⊙ User password can conduct user hierarchical management to improve the device management security

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- ⦿ Access Control can enhance network flexibility and security
 - ⦿ Storm suppression can restrain broadcast, unknown multicast and unicast
 - ⦿ SSHD configuration could encrypt transmitted data, prevent DNS and IP spoofing
 - ⦿ TELNET configuration and SSH configuration guarantee secure access to data
 - ⦿ VLAN can be set to simplify network planning
 - ⦿ Port Trunking can increase network bandwidth and enhance the reliability of network connection to achieve optimum bandwidth utilization
 - ⦿ Bandwidth management can reasonably distribute network bandwidth, preventing unpredictable network status
 - ⦿ Port isolation could achieve port isolation in the same VLAN and save VLAN resources
 - ⦿ PIM-DM/PIM-SM, IGMP Snooping and static multicast can be used to filter multicast data to save network bandwidth
 - ⦿ Ring, ERPS, STP/RSTP/MSTP can achieve network redundancy, preventing network storm
 - ⦿ Ping, Traceroute, Port Loopback could achieve network diagnosis and troubleshooting
 - ⦿ VRRP, RIP, OSPF could implement dynamic router configuration
 - ⦿ Bypass function can prevent communication breakdown caused by power supply failure
 - ⦿ NAT maps private IP address to the legal IP address of external network, which can slow the consumption of IP address space
 - ⦿ PoE could power device via Ethernet, which has greatly saved the cost of device power supply
 - ⦿ Loop detection could efficiently eliminate the influence caused by port loopback by detecting the existence of loopback
 - ⦿ IPDT can track IP device status and realize interaction with other applications

Dimension

Unit: mm



Specification

Standard & Protocol

IEEE 802.3 for 10Base-T
 IEEE 802.3u for 100Base-TX
 IEEE 802.3ab for 1000Base-T
 IEEE 802.3x for Flow Control
 IEEE 802.1D for Spanning Tree Protocol
 IEEE 802.1w for Rapid Spanning Tree Protocol
 IEEE 802.1s for Multiple Spanning Tree Protocol
 IEEE 802.1Q for VLAN
 IEEE 802.1p for CoS
 IEEE 802.1AB for LLDP
 IEEE 802.3af for PoE
 IEEE 802.3at for PoE+
 ITU-T G.8032 for ERPS

Management

SNMP v1/v2c/v3 Centralized Management of Equipment, RMON, Port Mirroring, QoS, LLDP, DHCP Server, File Management, Port Statistics, Log Information, Static ARP, PoE Management (for PoE version)

Security

Classification of User Permissions, ACL, NAT, 802.1X Authentication, DHCP Snooping, Radius Server Authentication, Port Alarm, Storm Suppression, SSHD Configuration, Telnet Configuration, Loop Detection, Link Flapping Protection, Aggregation Protection

Switch Function	802.1Q VLAN, Port Trunking, Bandwidth Management, Flow Control, Port Isolation, Storm Suppression
Unicast / Multicast	Static Multicast, Multicast Routing, Multicast Passthrough, IGMP-Snooping, IGMP, PIM-SM, PIM-DM, MVRP, MMRP
Redundancy Technology	Ring, STP/RSTP/MSTP, ERPS, Loop Detection
Troubleshooting	Ping, Traceroute, Port Loopback
Routing Technique	VRRP, RIP, OSPF, BGP, PBR
Time Management	NTP Client, RTC
Interface	<p>Gigabit M12: 10/100/1000Base-T(X), M12(Female), 8-Pin X-Coded, Automatic Flow Control, Full/half Duplex Mode, MDI/MDI-X Autotuning; it supports two groups of Bypass</p> <p>100M PoE M12:10/100base-T (X), M12 (Female), 4-Pin D-Coded, automatic flow rate control, full/half duplex mode, MDI/MDI-X automatic detection; The maximum capacity of a single port is 30W PoE power supply output. Pin 1 and 3 of PoE power supply are positive, while pin 2 and 4 are negative</p> <p>Alarm port: M12 (Female), 4-Pin D-Coded, support 1 relay alarm output, current load capability is 1A@30VDC or 0.3A@125VAC</p> <p>Console port: CLI command line management port (RS-232), M12(Female), 4-Pin D-Coded</p>
Indicator	Power indicator, alarm indicator, running indicator, interface indicator, PoE indicator
Switch Property	<p>Transmission mode: store and forward</p> <p>MAC address: 16K</p> <p>Packet buffer size: 12Mbit</p> <p>Backplane bandwidth: 128Gbps</p> <p>Switch time delay: <10μs</p>
ITxPT	<p>Ignition wake-up: the switch will not be started when it is powered on; it will start when the car is ignited and receives the ignition signal.</p> <p>Delayed shutdown: after the car is turned off, the switch will continue to work for a period of time before power is cut off.</p>

	<p>Inventory Service: providing ITxPT standard basic services.</p> <p>ITxPT xStatus: provide status report information and fault information of Inventory Service device through ITxPT records.</p>
Power Supply	<p>Power input: 24VDC(17~24VDC)</p> <p>Connection method: M12(Male), 4-Pin A-Coded</p> <p>Connection protection: anti-reverse connection</p>
Power Consumption	<p>No-load (normal temperature): 15W@24VDC</p> <p>Full-load (normal temperature): 60W@24VDC</p>
Working Environment	<p>Operating temperature: -40~75°C</p> <p>Storage temperature:-40~85°C</p> <p>Relative humidity: 5%~95%(no condensation)</p>
Physical Characteristic	<p>Housing: IP67 protection, metal</p> <p>Installation: wall mounting</p> <p>Dimension (W x H x D): 178mm×104mm×92mm</p> <p>Weight: 1.57kg</p>
Industrial Standard	<p>IEC 61000-4-2 (ESD, electrostatic discharge), Level 3</p> <ul style="list-style-type: none"> Air discharge:± 8kV Contact discharge: ±6kV <p>IEC 61000-4-4 (EFT, electrical fast transient pulses), Level 3</p> <ul style="list-style-type: none"> Power supply: ±2kV Ethernet interface: ±1kV Relay: ±2kV <p>IEC 61000-4-5 (Surge), Level 3</p> <ul style="list-style-type: none"> Power supply: common mode±2kV, differential mode±1kV Relay: common mode ±2kV, differential mode±1kV Ethernet interface: common mode±2kV <p>Shock: IEC 61373</p> <p>Free fall: IEC 60068-2-31</p> <p>Vibration: IEC 61373</p>
Authentication	CE, FCC, RoHS, ITxPT
Warranty	5 years

Ordering Information

Available Models	100M PoE M12	Gigabit M12 LAN Port With Bypass	Power Supply
TNS5800B-8P4GT -P24	8	4	17~24VDC power input



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