



## TNS5500D-8P4GT Series

Wall Mounting

12-Port Layer 2 Managed Industrial Ethernet Switch for Rail Transit

- Support 4 Gigabit M12 interfaces (with 2 groups of Bypass function), 8 100M PoE M12 interfaces
- Adopt Ring patented technology, support single ring, coupling ring, chain, Dual-homing function
- Support optional 2 24VDC or 110VDC power supply inputs
- Support IP67 protection grade
- Support -40~75°C wide operating temperature range



## Introduction

TNS5500D-8P4GT series is layer 2 managed industrial Ethernet switch designed for rail transit. The product conforms to the requirements of industrial standard EN50155 and EN50121. 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 or 110VDC 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, 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, 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 power supply or port has link failure, ALM indicator will be bright and send out alarm, meanwhile, alarm device connected to the relay will send out alarm for rapid scene troubleshooting. The input power supply is two independent power supply circuits which can ensure the normal operation of the device when one power supply fails. The hardware adopts fanless, low power consumption and wide temperature design, and the external heat sink provides extraordinary heat dissipation performance. This device has passed rigorous industrial standard tests, which can suit for the industrial scene environment with harsh requirements for EMC. It is designed for rail transit industrial and can be widely used in systems such as train control, on-board PIS, CCTV.

## 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



## Specification

<b>Standard &amp; Protocol</b>	<p>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</p>
<b>Management</b>	<p>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</p>
<b>Security</b>	<p>User permission rating, ACL, port alarm, power alarm, storm suppression, SSHD configuration, Telnet configuration</p>
<b>Switch Function</b>	<p>802.1Q VLAN, Port Trunking, Bandwidth Management, Flow Control, Port Isolation</p>
<b>Unicast / Multicast</b>	<p>Static Multicast, IGMP-Snooping</p>
<b>Redundancy Technology</b>	<p>Ring, STP/RSTP/MSTP, ERPS, Loop Detection</p>
<b>Troubleshooting</b>	<p>Ping, Traceroute, Port Loopback</p>
<b>Time Management</b>	<p>NTP Client</p>
<b>Interface</b>	<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                  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                  Alarm port: M12 (Female), 4-Pin D-Coded, support 1 relay alarm output,</p>

	<p>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>
<b>Indicator</b>	Power indicator, alarm indicator, running indicator, interface indicator, PoE indicator
<b>Switch Property</b>	<p>Transmission mode: store and forward</p> <p>MAC address: 16K</p> <p>Packet buffer size: 12Mbit</p> <p>Backplane bandwidth: 56G</p> <p>Switch time delay: &lt;10<math>\mu</math>s</p>
<b>Power Supply</b>	<p>Power supply range:</p> <ul style="list-style-type: none"> <li>TNS5500D-8P4GT-P24: 24VDC (18~36VDC), dual power supply</li> <li>TNS5500D-8P4GT-P110: 110VDC (66~156VDC), dual power supply</li> </ul> <p>Connection method: M12(Male), 4-Pin A-Coded</p> <p>Connection protection: non-polarity</p>
<b>Power consumption</b>	<p>TNS5500D-8P4GT-P110</p> <ul style="list-style-type: none"> <li>Full load (without PoE load): 15.8W@110VDC</li> <li>Full load (with PoE load): 124.6W@110VDC</li> </ul>
<b>Working Environment</b>	<p>Operating temperature: -40~75°C</p> <p>Storage temperature: -40~85°C</p> <p>Relative humidity: 5%~95%(no condensation)</p>
<b>Physical Characteristic</b>	<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>
<b>Industrial Standard</b>	<p>IEC 61000-4-2 (ESD, electrostatic discharge), Level 4</p> <ul style="list-style-type: none"> <li>Air discharge: <math>\pm 15</math>kV</li> <li>Contact discharge: <math>\pm 8</math>kV</li> </ul> <p>IEC 61000-4-4 (EFT, electrical fast transient pulses), Level 3</p> <ul style="list-style-type: none"> <li>Power supply: <math>\pm 4</math>kV</li> <li>Ethernet interface: <math>\pm 2</math>kV</li> <li>Relay: <math>\pm 4</math>kV</li> </ul> <p>IEC 61000-4-5 (Surge), Level 3</p> <ul style="list-style-type: none"> <li>Power supply: common mode<math>\pm 4</math>kV, differential mode<math>\pm 2</math>kV</li> </ul>

- Relay: common mode  $\pm 4\text{kV}$ , differential mode  $\pm 2\text{kV}$
- Ethernet interface: common mode  $\pm 4\text{kV}$

Shock: IEC 61373

Free fall: IEC 60068-2-32

Vibration: IEC 61373

Authentication	CE, FCC, RoHS, EN50155, EN50121-3-2, IEC61373
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Warranty 5 years



## Ordering Information

Available Models	100M PoE M12	Gigabit M12 With Bypass	Power Supply
TNS5500D-8P4GT-P24	8	4	24VDC (18~36VDC)
TNS5500D-8P4GT-P110	8	4	110VDC (66~156VDC)



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