TNS5800ETB-8T-HV

Wall Mounting

8-Port 100M Copper Port Layer 3 Industrial Ethernet Switch

- Support 8 100M M12 interfaces (with 2 groups of Bypass function), 1 USB M12 interface
- Support protocols such as TTDP and TRDP, and provide high-performance NAT function, which conforms to IEC61375-2-3 and IEC61375-2-5.
- Support MRP ring network, reconfiguration time < 200ms
- Adopt Ring patented technology, support single ring, coupling ring, chain, Dual-homing ring network function, automatic recovery time of network failure < 20ms
- Support 2 110VDC power inputs, support anti-reverse connection
- Support IP54 protection grade
- Support -40~75℃ wide operating temperature range

Industrial Grade Fanless Desig

ROBUST INDUSTRIAL CONNECTION

Introduction

TNS5800ETB-8T-HV is 8-port 100M Layer 3 Industrial Ethernet Switch. Ethernet interfaces use firm and reliable M12 connectors which can adapt to usage scenario with vibration and shock. This product supports 2 110VDC power supply inputs and adopts wall mounting, which can meet the needs of different application sites.

The network management system supports a variety of network protocols and industry standards, such as IPv6, RIP, OSPF, PIM, VRRP, ISIS, NAT, TTDP, TRDP, Ring, STP/RSTP/MSTP, ERPS, VLAN, IGMP/MLD, IGMP/MLD Snooping, DHCP Server/Relay, LLDP, LACP, port mirroring. It possesses complete management functions and supports SNMP centralized management, port statistics, storm suppression, network diagnosis, online upgrade, etc. CLI, HTTP, HTTPS, TELNET, SSH, Netconf. 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 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. This device has passed rigorous industrial standard tests, which can suit for the industrial scene environment with harsh requirements for EMC. It can be widely used in systems such as train network, signal, on-board PIS, CCTV.

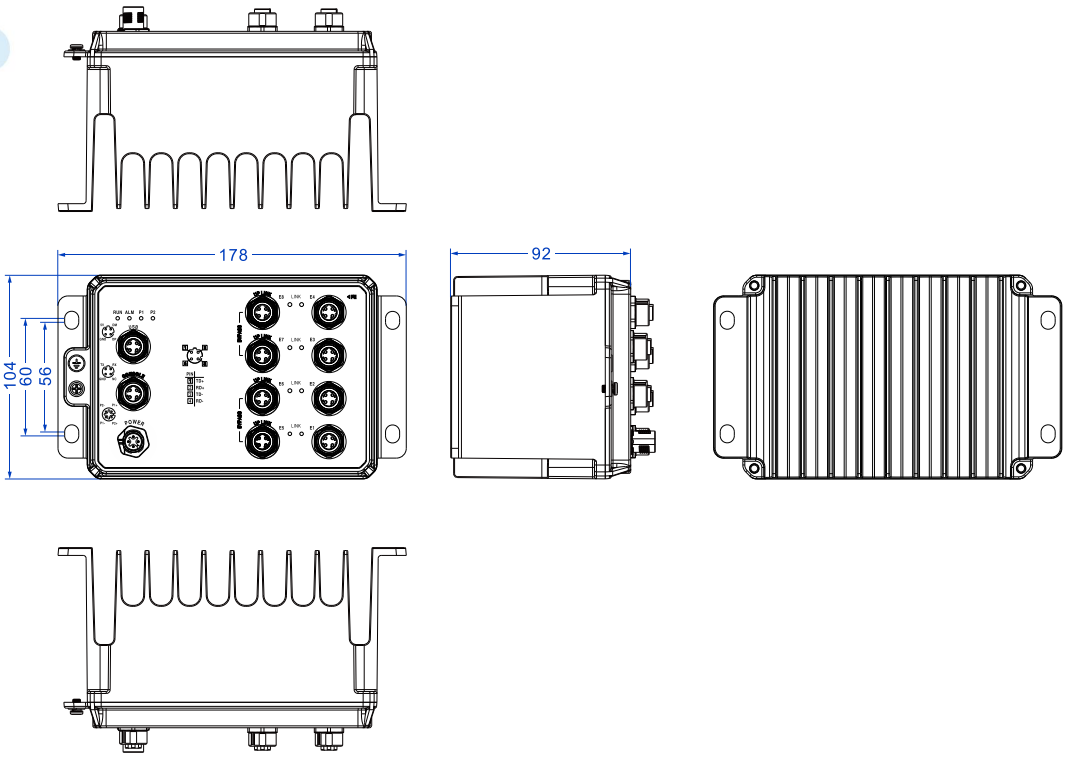
Features and Benefits

- SNMPv1/v2c/v3 is used for network management of various levels
- RMON can be used for efficient and flexible network monitoring
- LLDP can achieve automatic topology discovery, which is convenient for visual management
- DHCP server and DHCP client could be used for allocating IP address of different strategies
- DHCP relay function can realize IP address, gateway, DNS configuration cross network segment
- DHCP Snooping can ensure DHCP client gets IP address from legal DHCP server
- File management is convenient for the device rapid configuration and online upgrading
- Log information and log server can record user operation, system failure, system security and other information locally and remotely
- User privilege classification configuration can set user privilege level
- SSH configuration and HTTPS configuration can improve device’s management security and guarantee data access security
- Ring and STP/RSTP/MSTP can achieve network redundancy, preventing network storm
- EPRS function can realize link backup and improve the reliability of network

- Relay alarm is convenient for troubleshooting of construction site
- Storm suppression can restrain broadcast, unknown multicast and unicast
- VLAN is used for simplifying network planning
- Port Trunking and LACP can increase network bandwidth and enhance the reliability of network connection to achieve optimum bandwidth utilization
- IGMP/MLD Snooping can be used for filtering multicast traffic to save the network bandwidth
- IGMP/MLD can be used to manage and maintain multicast members
- ARP could be used for MAC address resolution
- VRRP, RIP/RIPng, ISIS, OSPF/OSPFv3 and BGP can realize dynamic routing configuration
- PIM-DM and PIM-SM can be used to create and maintain multicast routing table entries and realize multicast routing forwarding
- NAT maps private IP address to the legal IP address of external network, which can slow the consumption of IP address space
- Loop detection could efficiently eliminate the influence caused by port loopback by detecting the existence of loopback
- Support TTDP and TRDP protocols, achieve automatic train network marshalling operation, and discover ETB network topology information
- IPDT can track IP device status and realize interaction with other applications
- Smart Link link backup, providing reliable and efficient backup and fast switching mechanism
- Conduct network diagnosis and troubleshooting via Ping, Traceroute and cable diagnosis
- Port mirroring can conduct data analysis and monitoring, which is convenient for online debugging

Dimension

Unit: mm



Specification

Standard & Protocol	IEEE 802.3 for 10Base-T IEEE 802.3u for 100Base-TX 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 ITU-T G.8032 for ERPS IEEE 802.1Q for VLAN IEEE 802.1AB for LLDP IEEE 802.3ad for LACP
Management	SNMP v1/v2c/v3 centralized managed equipment, LLDP, DHCP Server, DHCP Relay, port speed limit, port isolation, port statistics, file management, online upgrade, log information, Syslog server, TTDP, TRDP
Security	User privilege classification, SSH/HTTPS protocol authorization, access control, SNMP, RMON, link flap protection, port loop detection, DHCP Snooping, IPDT, IPv6DT, Smart-Link, NAT, port alarm, temperature alarm, power alarm, network load alarm
Switch Function	802.1Q VLAN, MAC, static aggregation, LACP, ARP, storm suppression

Unicast / Multicast	IGMP-Snooping, MLD-Snooping, IGMP, MLD, PIM-SM, PIM-DM, IPv6-PIM-SM, IPv6-PIM-DM
Redundancy Technology	MRP, Ring, STP/RSTP/MSTP, ERPS
Routing Technique	RIP, RIPng, OSPF, OSPFv3, ISIS, VRRP, IPv6 VRRP, BGP
Troubleshooting	Ping, Traceroute, Network Cable Diagnosis
Time Management	NTP Client, Time Zone Configuration
Special Function	Support automatic backup and configuration function Conform to IEC61375-2-3 and IEC61375-2-5 standards, support functions such as TTDP, R-NAT, TRDP, TTDB (only for ETB products)
Interface	100M M12: 8 10/100Base-T(X), M12(Female), 4-Pin D-Coded, Automatic Flow Control, Full/half Duplex Mode, MDI/MDI-X Autotunning；it supports two groups of Bypass Console port: 1 CLI command line management port (RS-232), M12(Female), 4-Pin D-Coded USB interface: 1 USB M12(Female), 4-Pin D-Coded
Indicator	Power indicator, running indicator, alarm indicator, interface indicator
Switch Property	Transmission mode: store and forward Backplane bandwidth: 50Gbps Switch delay: <10μs
Power Supply	Power input: 2 110VDC Connection method: M12(Male), 4-Pin A-Coded Connection protection: anti-reverse connection
Power Consumption	No-load: 7.4W@110VDC Full-load: 8.2W@110VDC
Working Environment	Operating temperature: -40~75℃ Storage temperature:-40~85℃ Relative humidity: 5%~95% (no condensation)
Mechanical Structure	Housing: IP54 protection, metal Installation: wall mounting Dimension (W x H x D): 178mm×104mm×92mm

	Weight: 1.492kg
Industrial Standard	IEC 61000-4-2 (ESD, electrostatic discharge), Level 3 ● Contact discharge: ±6kV ● Air discharge: ±8kV IEC 61000-4-4 (EFT, electrical fast transient pulses), Level 4 ● Power supply: ±4kV ● Ethernet interface: ±2kV IEC 61000-4-5 (Surge), Level 4 ● Power supply: differential mode±2kV, common mode±4kV ● Ethernet interface: ±2kV Shock: IEC 60068-2-27 Free fall: IEC 60068-2-31 Vibration: IEC 60068-2-6
Authentication	CE, FCC, RoHS
Warranty	5 years

Ordering Information

Model	100M M12 (with 2 pairs of bypass)	USB M12	Power Supply
TNS5800ETB-8T-HV-N	8	1	110VDC dual power input