8008TX-L3 Datasheet

Aiming to create better and safer working environments and life experiences through the products we deliver.

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Layer 3 Switch with Cyber Security and Enhanced ERPS v2 for Critical Applications

8008TX-L3

Industrial 8-port Full Gigabit Managed Ethernet Switch, 8GT

The 8008TX-L3 is the first full Gigabit Managed Switch with Layer 3 routing functions. It gives you more flexibility in planning your large-scale IP network. 8008TX-L3 supports various routing protocols such as IP/VLAN routing, RIP, OSPF, VRRP router redundancy, which are fully compatible with your backbone network. The 8008TX-L3 provides 8-port full Gigabit Ethernet, including 8-port Gigabit RJ45, the switch provides reliable IP network with high performance. Advanced Cyber Security and redundancy features of 8008TX-L3 guarantee the fastest network recovery, zero packet loss data transmission, and high level of network protection against the hackers' attacks.

Full Gigabit Switching and Ultra-high Throughput

- 8-port Full Gigabit Ethernet RJ-45
- 16K MAC address table
- 1.5MByte packet buffer memory for H.264 burst
- 9K bytes jumbo frame
- Store-and-forward with non-blocking switch fabric

Dynamic Routing with Redundancy Protection

- RIPv1&v2, OSPFv1&v2 for intra-domain routing within an autonomous system
- Efficient unicast/multicast static routing
- VRRP guarantees sustainable routing in a single point of failure

ITU-T G.8032 v1/v2 ERPS Ring Redundancy

- An ITU standard Ring redundancy Protocol
- Provide sub-50ms protection and recovery switching for Ethernet traffic
- Interoperate with 3rd party industrial switch and still remain fast recovery time
- Interoperate with commercial switch instead of STP/RSTP
- Efficient network interconnection and topology with ERPS Chain, multiple chains

IEC62443-4-2 Level 3 / 4 Cyber Security*

- L2-L7 IPv4/IPv6 Access Control List (ACL)
- DHCP Snooping, IP Source Guard, Dynamic ARP Inspection
- 802.1Q VLAN, Private VLAN, Advanced Port Security
- Multi-Level user passwords
- HTTPS/SSH/SFTP, 256-bit encryption
- 802.1X MAB for non-802.1X compliant end devices
- RADIUS/TACACS+ centralized password authentication

Rugged Design for Wayside Surveillance

- EN50121-4 for railway trackside applications
- Top level EMC protection and excellent heat dissipation design for operating in -40˚C~75˚C environment
- IEC 61000-6-2/4 Heavy Industrial Environment

L3+ Management Features

- Various configuration paths, including WebGUI, CLI, SNMP and RMON
- IEEE 1588v1/v2 PTP time management
- LLDP topology control
- Software utility interface for LAN devices management
- NMS for individual component monitoring

Ordering Information

Model Name	Description
8008TX-L3	8-Port Layer3 Fully Managed Industrial Ethernet Switch, 8 RJ45 Ports 10/100/1000Base-T(X), DIN-Rail, Dual Power Input 12-48VDC, -40°C-75°C
8008TX-L3-PS	8008TX-L3，w/ 1 APS-30-24

Technology	
Standard	IEEE 802.3 10Base-T Ethernet
	IEEE 802.3u 100Base-TX Fast Ethernet
	IEEE 802.3u 100Base-FX Fast Ethernet Fiber
	IEEE 802.3ab 1000Base-T Gigabit Ethernet Copper
	IEEE 802.3z Gigabit Ethernet Fiber
	IEEE 802.3x Flow Control and back-pressure
	IEEE 802.1p Class of Service (CoS)
	IEEE 802.1Q VLAN and GVRP
	IEEE 802.1AB Link Layer Discovery Protocol (LLDP)
	IEEE 802.1D-2004 Rapid Spanning Tree Protocol (RSTP)
	IEEE 802.1Q-2005 Multiple Spanning Tree Protocol (MSTP)
	IEEE 802.3ad Link Aggregation Control Protocol (LACP)
	IEEE 802.1x Port based Network Access Protocol
	IEEE 1588 Precision Time Protocol v1/v2
	ITU-T G.8032 Ethernet ring protection switching(ERPS)
Performance	
Switch Technology	Store and Forward Technology with non-blocking Switch Fabric
Number of MAC Address	16k
Packet Buffer Memory	1.5MBytes
Jumbo Frame	9216 Bytes
Transfer performance	10Base-TX: 14,880pps, 100Base-TX/FX: 148,800pps, 1000Base-TX/FX: 1,488,100pps
VLAN	256 VLANs
VLAN ID	1~4094
Class of Service	8 Priority Queues per Port
Watchdog	Hardware-based 10 seconds timer
Interface	
Ethernet Port	8008TX-L3: 8 x 100/1000Base-T RJ45, Auto Negotiation, DDM
System LED	2 x Power: Green On, 1 x DO/Alarm: Red On
Ethernet Port LED	Link (Green On), Active (Green Blinking), Speed 1000M(Amber On), Speed 100M(Off)
SFP LED	Link (Green On), Active (Green Blinking), Speed 1000M(Amber On), Speed 100M(Off)
Reset	System Reboot(2-6 Seconds)/Default Settings Reset(over 7 Seconds)
Console	1 x RS232 in RJ45 for System Configuration. Baud Rate:115200.n.8.1
Power Input, Digital Input, Digital Output	8-Pin Removable Terminal Block Connector 4 Pins for Redundant Power 4 Pins for DI, DO (Relay Alarm) 1x Digital Output: Dry Relay Output with 0.5A /24V DC 1x Digital Input: DI with Photo-Coupler Isolation High: DC 11~30V Low: DC 0~10V

Power Requirement	
Input Voltage	24VDC (12~48VDC)
Reverse Polarity Protect	Yes
Input Current	0.67A @ 24V
Power Consumption	Max 16.08W@24VDC full traffic, suggest to reserve 15% tolerance
Software	
Management Interface	CGI WebGUI, Command Line Interface (CLI), Telnet, SNMP
Time Management	NTP, IEEE 1588 Precision Time Protocol v1/v2
Network Management	IPv4/IPv6, SNMP v1/v2c/v3/Trap, MIBs, RMON, LLDP, DHCP server/client/Option 82, TFTP, System Log, SMTP
Traffic Management	Flow Control, Port Trunk/802.3ad LACP, VLAN, Private VLAN, GVRP, GMRP, QinQ, QoS, IGMP Snooping v1/v2/v3, Rate Control, Storm Control, Port Mirror
Security	IEEE 802.1X/RADIUS, Private VLAN, ACL(MAC/IP filter), HTTPs/SSH secure login
Redundancy	Rapid Spanning Tree Protocol (RSTP)/Multiple Spanning Tree Protocol (MSTP) ITU-T G.8032 v1/v2 Ethernet Ring Protection Switching (ERPS) Virtual Router Redundancy Protocol (VRRP)
L3 Routing	Static/Dynamic IP Routing, VLAN Routing, RIP v1/v2(64 entries), OSPF v1/v2, IGMP and Multicast Routing (64 entries)
Mechanical	
Installation	DIN Rail
Enclosure Material	Steel Metal Additional Aluminum Side Heat Sink
Dimension	78 mmx 155 mm x 125 mm (W x H x D) / without DIN Rail Clip
Ingress Protection	IP41
Weight	~1285g without package
Environmental	
Operating Temperature	-40°C~75°C
Humidity	0%~95% Non- Condensing
Storage Temperature	-40°C~85°C
Hi-Pot Insulation	AC 1.5KV
MTBF	>2,000,000 hours
Warranty	5 years
Standard	
Safety	IEC60950-1 Compliance
EMC	EN61000-6-2/EN61000-6-4
EMI	CISPR 22, FCC part 15B Class A
EMS	EN61000-4-2 ESD, EN61000-4-3 RS, EN61000-4-4 EFT, EN61000-4-5, EN61000-4-6 CS, EN61000-4-8 Magnetic Field
Railway	EN50121-4

Function interface

DIN Clip

Integrated Power Connector
- 1 x 8-pin terminal block
  4 pin for redundant power input
  2 pin DI
  2 pin DO
- Easy installation

System LED
- 2 x Power
- 1 x DO Alarm

Gigabit Ethernet
- 8-port 10/100/1000M RJ45

Easy System Management
- RS232 console

Installation dimensions

Unit: mm