8010TX
Datasheet

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

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Rugged High PerformanceL2+ Cyber Security Switch

8010TX

Industrial 10-port Full Gigabit Managed Ethernet Switch, 10GT

8010TX is designed for industrial environments requiring high security and high quality Ethernet/Fiber communication, such as industrial automation, road traffic control, etc. 8010TX provides 10-port full-gigabit Ethernet RJ45. 8010TX provides wire-speed switching, Cyber Security, network redundancy…L2+ management software features. Full Gigabit capability and rugged industrial design ensures system high performance and reliability in harsh environments. For convenient traffic control and zero packet loss data transmission, the switch offers contemporary management and security functions.

High performance CPU & Full Gigabit Switching

- Powerful 1.2GHz ARM Cotex-A9 processor
- Non-blocking switch fabric design
- 10-port Full Gigabit Ethernet ports, including 10 Gigabit RJ45
- 8 flexible Class of Service(CoS) queues
- 16K MAC address table
- 9Kb Jumbo Frame
- Fiber ports support both 100M and 1000M SFP
- DDM function for fiber connectivity monitoring
- Energy-Efficient Ethernet for power saving

IEC62443-4-2 Level 3 / 4 Cyber Security

- **802.1X/RADIUS** port-based access control
- IP Security/Port Security
- HTTPs/SSH Management IP secure access
- Supports advanced cyber security features, 802.1X MAB, TACAS+, DHCP Snooping, IP Source Guard, Dynamic ARP Inspection, advanced Port Security & L2-L7 Access Control List

ITU ERPSv2 *PLUS* Ring Technology

- ITU G.8032 v1/v2 ERPS Ring Redundancy & HW-based CFM for quick acknowledgement while GbE copper link failure, providing 20ms recovery time and seamless restoration.
- ERPSv2 available to replace legacy Ring + Chain + Dual Homing
- Inter-Operability with 3rd party industrial switch and still remain fast recovery time.
- Support Enhanced RSTP for large ring network topology with up to 80 switches.

L2+ Management Switch Features

- Various configuration paths, including WebGUI, CLI, SNMP, Modbus TCP, LLDP topology control
- Layer 2 Switch features include VLAN, QoS, LACP/Trunk, Rapid Spanning Tree protocol…etc
- IGMP Snooping v1/v2/v3, IGMP Query, 512 L2 Multicast Groups for video applications
- Built-in DHCP Server that automatically provides and assigns IP addresses, default gateways to clients

Industrial IoT LAN & Cloud Management

- Support Software Utilities:
  -ANMS Network Management System
  -AIAS for Configuration Management
- Support Modbus TCP for monitoring in field

Rugged Design for Wayside Network Switching with Wide Power Input Range

- **12~48V** wide power range design with redundant power input
- Excellent heat dissipation design for operating in-**40~75ºC** environments
- High level **EMC protection** exceeding traffic control and heavy industrial standards' requirements
- IEC 61000-6-2/4 Heavy Industrial Environment
- EN50121-4 railway trackside EMC compliance

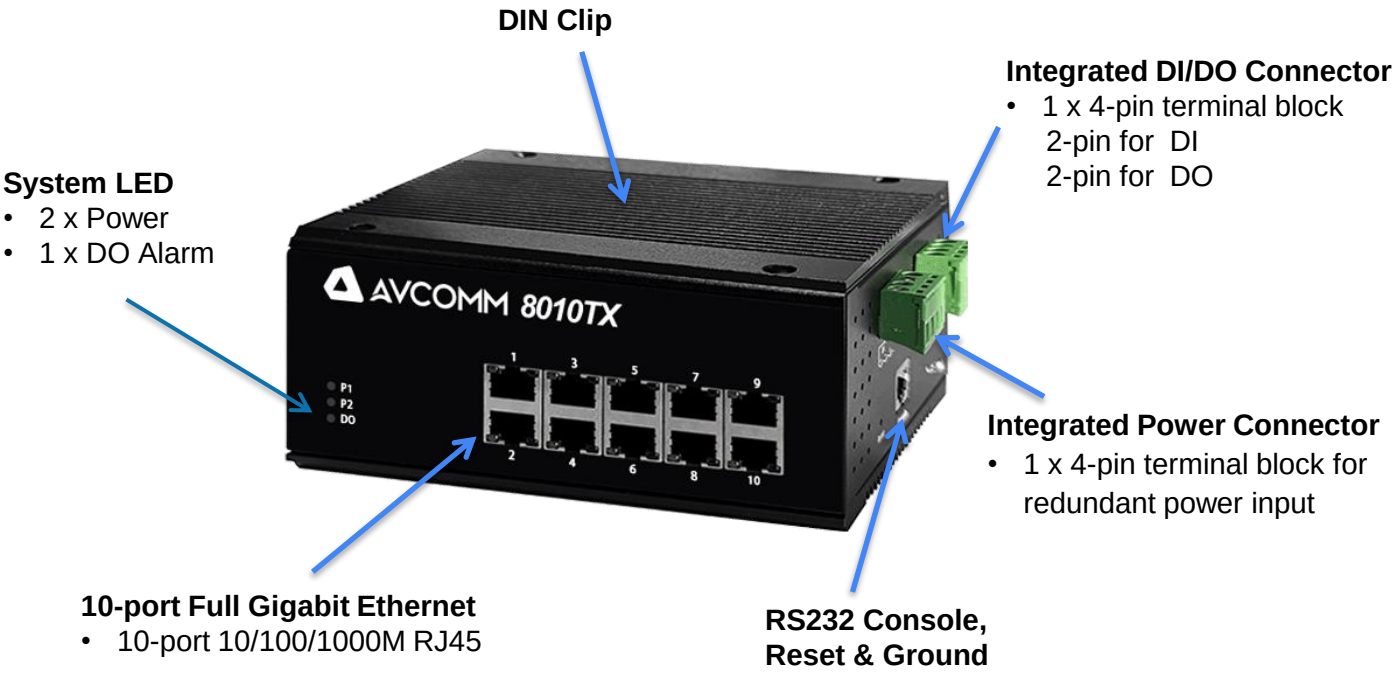
Ordering Information

Model Name	Description
8010TX	10-Port Fully Managed Industrial Ethernet Switch, 10 RJ45 Ports 10/100/1000Base-T(X), DIN-Rail, Dual Power Input 12-48VDC, -40°C-75°C
8010TX-PS	8010TX, 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 802.3az (Energy Efficient Ethernet)
	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 802.1S Multiple Spanning Tree Protocol (MSTP)
	IEEE 801.1AX/802.3ad Link Aggregation Control Protocol (LACP)
	IEEE 802.1x Port based Network Access Protocol
	IEEE 1588 Precision Time Protocol v2
	ITU-T G.8032 version 2 Ethernet ring protection switching(ERPSv2)
Performance	
Switch Technology	Store and Forward Technology with Non-Blocking Switch Fabric Internal Packet Buffer: 4Mb.Forwarding rate: 14.88Mpps/10-port (1,488,000pps/Gigabit port)
CPU/RAM	Cotex-A9, max. 1.2GHz, DDR3 2Gb
Number of MAC Address	16K
Jumbo Frame	9216 Bytes
VLAN	256 VLANs, VLAN ID 1~4094
IGMP Groups	512
Traffic Prioritize	8 Priority Queues per Port
Interface	
Ethernet Port	8010TX: 10 x 100/1000Base-T RJ45, Auto Negotiation, Auto MDI/MDIX
System LED	2 x Power: Green On.1 x DO/Alarm: Red On
Ethernet Port LED	Link (Green On), Activity (Green Blinking), Speed 1000M(Amber On), Speed 100M (Off)
SFP LED	Port: Link (Green On), Activity (Green Blinking); 1000M: 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, 8010TX: Pin Define: 3: TxD, 6:RxD, 5:GND Also available to support Pin Define: 3: RxD, 4: TxD, 6:GND (Configured by Internal Jumper)
Digital Input, Digital Output	4-Pin Removable Terminal Block Connector, 2-Pins for DI, 2-Pins for DO (Relay Alarm) 1x Digital Output: Dry Relay Output with 0.5A /24V DC 1x Digital Input: High: DC 11V~30V, Low: DC 0V~10V
Power Input	4-Pin Removable Terminal Block Connector for Redundant Power
Power Requirement	
Input Voltage	24VDC (12~48VDC)
Reverse Polarity Protect	Yes
Input Current	0.4A @ 24V
Power Consumption	Typical 9.6W@24V Max. 12W@60VDC full traffic, suggest to reserve 15% tolerance

Software	
Management	WebGUI, Command Line Interface (CLI), IPv4/IPv6(RFC2460), Telnet, SNMP v1/v2c/v3, RMON, SNMP Trap, LLDP, DHCP Server/Client/Option 82, TFTP, System Log, SMTP
Traffic Management	Flow Control, Rate Control, Storm Control, CoS, QoS, RFC 2474 DiffServ
Filter	IGMP Snooping v1/v2/v3, IGMP Snooping Fast-Leave/Immediate-Leave, IGMP Query, GMRP, IEEE802.1Q VLAN, QinQ, GVRP, Private VLAN
Security	IEEE 802.1X/RADIUS, TLS v1.2, Access Control List (ACL, MAC/IP/ARP filter), HTTPs/SSH secure login, First login password management
Advanced Security	Advanced Security: TACACS+, Mutli-user authentication, IEEE802.1x MAB, DHCP Snooping/IPSG, Dynamic ARP inspection, SFTP
Redundancy	ERPSv2 Plus, ITU-T G.8032 v1/v2 Ethernet Ring Protection Switching (ERPSv2), HW CFM, Loop Protection, Rapid Spanning Tree Protocol/Spanning Tree Protocol (RSTP/STP), Multiple Spanning Tree Protocol (MSTP) eRSTP (Enhanced Rapid Spanning Tree), up to 80 switches in one Ring
Time Management	NTP, IEEE 1588 Precision Time Protocol v2
Industrial IoT	Modbus TCP
Utility	AIAS, ANMS (By Request)
MIB	ERPS MIB, MIB-II, Ethernet-like MIB*, P-BRIDGE MIB, Q-BRIDGE MIB, Bridge MIB, RMON MIB Group 1, 2, 3, 9*, Private MIB
Diagnostic	LLDP, Port Mirror, Ping, Port Statistic, Event Log
Mechanical	
Installation	DIN Rail
Enclosure Material	Steel Metal Additional Aluminum Side Heat Sink
Dimension	78 mmx155 mmx125 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
MTBF	>2,000,000 hours
Warranty	5 years
Standard	
FCC	CISPR 22, FCC part 15B Class A
CE	EN61000-6-2/EN61000-6-4, EN50121-4 Compliance

Function interface



Installation dimensions

Unit: mm