

9561-8GT4XS-TSN

Layer 3 Managed 8 x 10/100/1000 RJ45 &
4 x FX/GbE/10G SFP+ Industrial TSN Switch

Description

The 9561-8GT4XS-TSN industrial network switch is designed to deliver high performance and reliability in demanding industrial environments. It features a versatile interface with 8x 10/100/1000Mbps RJ45 ports and 4x FX/GbE/10G SFP+ ports, ensuring robust and flexible connectivity options. The switch supports precision timing protocols such as IEEE 1588 and 802.1AS-Rev, making it ideal for applications requiring synchronized operations.

Advanced features like G.8032 and full TSN support, along with TSN Domain Protection (802.1Qci, 802.1Qav, 802.1Qbv, 802.1Qbu/802.1br), enhance network reliability and security. High traffic availability is maintained through standards like 802.1CB, IEC-62439-2 2016 MRP, and HSR/PRP, while time distribution capabilities include 802.1AS-2020 (gPTP), IEEE1588:2019, and 1PPS In/Out. Efficient power management is ensured with 802.3az (EEE) and Wake-on-LAN (WoL) capabilities.

Features Highlight

Precision Timing and TSN Support

Fully compliant with Time-Sensitive Networking (TSN) protocols, including IEEE 802.1Qci, 802.1Qav, 802.1Qbv, 802.1Qbu, 802.1BR, IEEE 802.1CB, 802.1AS-2020 gPTP, and IEEE 1588v2, this switch enables deterministic data transmission, precise time synchronization, and robust traffic shaping to meet automation and control system needs.

Advanced Redundancy and Reliability

Implements Ethernet ring protection protocols including G.8032, IEC-62439-2 MRP, HSR, PRP to guarantee continuous network uptime and fast recovery from failures.

Comprehensive Network Security

Includes IEEE 802.1X port-based authentication, TACACS, ACL, DHCP Snooping, ARP Inspection, BPDU Guard, Root Guard, IP Source Guard, and MAC Anti-spoofing to prevent unauthorized access and safeguard network integrity.

Advanced Traffic Control and Quality of Service

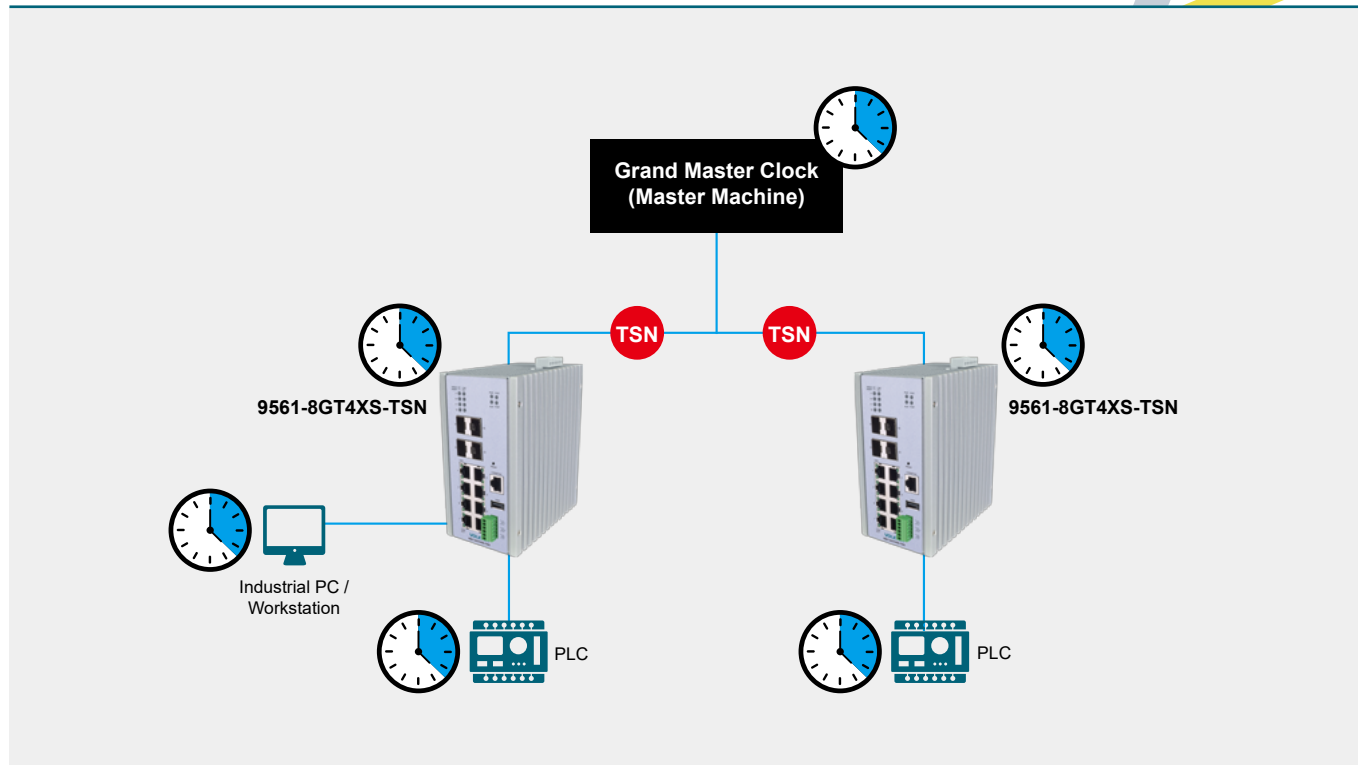
Equipped with VLAN (IEEE 802.1Q), QinQ, IGMP snooping/filtering, MVLAN, QoS, storm control, rate limiting, loop detection, port isolation, SPAN/RSPAN/VSPAN, and inter-VLAN routing, enabling granular bandwidth control and smooth multimedia/data transmission.



RoHS **CE** **FC**



Applications



Specifications

Standards		Interface				
IEEE 802.3	10BASE-T	Ports	4 x FX/GbE/10G SFP+ Slots			
IEEE 802.3u	100BASE-TX		1 x RS232 Console Port			
IEEE 802.3ab	1000BASE-T		1 x USB Port			
IEEE 802.3z	1000BASE-SX/LX		2 x pairs Dry Contact Digital Inputs (DI)			
IEEE 802.3ae	10GBASE-SR/LR/ER		1 x Alarm Relay Digital output (DO)			
IEEE 802.3 Nway	Auto-negotiation	LED Panel	PWR, RPS, ALM, POST, 1000, 10G, LNK/ACT			
IEEE 802.3x	Flow Control	Features				
IEEE 802.3ad	Link Aggregation	Performance	Jumbo Frames Size: 16Kbytes			
IEEE 802.3az	Energy Efficient Ethernet (EEE)		MAC Table Entries: 16K			
IEEE 802.1AB	LLDP		Switching Fabric: 56Gbps			
IEEE 802.1ad	QinQ	Forwarding Rate: 41.66Mpps	Management			
IEEE 802.1D	STP	Management		CLI, Telnet/SSH, HTTP/HTTPS, Syslog, NTP, DHCP Server/Client, DHCP Relay/Option 82, Server Control, Cable Test, DDM, SFP Info, Cable Test, Port Utilization, MAC Aging Time, EEE, IPv4 Ping/Traceroute, FTP Client, DSN Client/Relay, SNMP v1/v2c/v3, SNMP Trap/Inform, LLDP, LLDP-MED, MVLAN, UDLD, Port Management, SPAN/RSPAN/VSPAN, Firmware Upgrade, Configuration Backup/Restore, Mirroring, RMON, Statistics, ERPS, Digital Inputs/Digital Output, Standard/Private MIB, sFlow, OAM		
IEEE 802.1w	RSTP			Reliability	STP/RSTP/MSTP, ERPS v1/v2, LACP, Static Trunk, Code redundancy, ITU-T G.8031, MRP, PRP, HSR	
IEEE 802.1s	MSTP				VLAN	IEEE 802.1Q, GARP/GVRP, MVRP, Port-based VLAN, Private VLAN, MAC-based VLAN, IP Subnet-Based VLAN, Protocol-Based VLAN, QinQ, VLAN Translation, Voice VLAN, iPVLAN
IEEE 802.1p	Class of service					
IEEE 802.1Q	VLAN Tagging					
IEEE 802.1X	Network Access Control					
IEEE 1588v2	PTP					
IEEE 802.3ah	EFM					
IEEE 802.3ag	CFM					
ITU-TY.1731 Ethernet	OAM					
IEEE 802.1AS	gPTP					
IEEE 802.1Qci	PSFP					
IEEE 802.1Qav	CBS					
IEEE 802.1Qbv	TAS					
IEEE 802.1Qbu	FP					
IEEE 802.1br	BPE					
IEEE 802.1CB	FRER					



Traffic Control	IGMP Snooping v1/v2/v3, IGMP Querier/Throttling/Proxy/Multicast Group/Group Filter, IGMP Immediate/Fast Leave, MVR, IGMP Explicit Host Tracking, MRP, QoS, Packet Scheduling/Classification, Priority Overwrite, Flow Control, Rate Limit, Storm Control, Traffic Policing/Shaping, Port Isolation, Loop Detection
L3 Routing	Inter-VLAN Routing, Static Route, RIPv2, OSPFv2
Security	DHCP Snooping, DHCP Server Screening, IP Source Guard, ARP Inspection, ACL, TACACS+, RADIUS, SSH, 802.1x, Port Security, MAC Search, Sticky MAC, Static MAC, BPDU Guard/Filter, Root Guard, Management Host, HTTPs, MAC Anti-spoofing, DoS/DDoS Attack Prevention, SFTP, SCP, Secure Boot
Power	
Input Voltage	Primary inputs: 12~48VDC Redundant Inputs: 12~48VDC
Power Consumption	System: TBD
Mechanical and Environment	
Housing	Aluminum (IP30 Protection)
Operating Temperature	-40°C~70°C (-40°F~158°F)
Storage Temperature	-40°C~85°C (-40°F~185°F)
Operating Humidity	5 to 95% RH (non-condensing)
Storage Humidity	5 to 95% RH (non-condensing)
Weight	TBD
Dimension (WxHxD)	80 x 160 x 140.3 mm (3.15 x 6.30 x 5.52 in)

Note:

- * The SFP communication distance upon the request.
- * Industrial SFP with wide operating temperature from -40°C~85°C (-40°F~185°F) is available upon request.
- * Specifications subject to change without notice.

Certifications	
EMI	FCC Part 15 Subpart B Class A EN 55011 / BS EN 55011 Class A EN 55032 / BS EN 55032 Class A EN 61000-6-4 / BS EN 61000-6-4 ICES-003 Issue 7
EMS	EN 55035 / BS EN 55035 EN 61000-6-2 / BS EN 61000-6-2 EN 61000-4-2 (ESD) EN 61000-4-3 (RS) EN 61000-4-4 (Burst) EN 61000-4-5 (Surge) EN 61000-4-6 (CS) EN 61000-4-8 (PFMF)
Freefall	IEC 60068-2-31
Shock	IEC 60068-2-27
Vibration	IEC 60068-2-6
Ordering Information	
9561-8GT4XS-TSN	Layer 3 Managed 8 x 10/100/1000 RJ45 & 4 x FX/GbE/10G SFP+ Industrial TSN Switch
Optional Accessories	
Power Supply	SDR-120-48: 120W DIN-Rail 48VDC Industrial Power Supply, -25°C~70°C (-13°F~158°F)
GBM-162	10GSR SFP+, MM, 300m, DDM
GBM-162-10	GBM-162-10: 10GLR SFP+, SM, 10Km, DDM
GBM-162-40	GBM-162-40: 10GER SFP+, SM, 40Km, DDM
GBM-123TS	GBM-123TS: 1000BASE-LX, Bi-Di SFP TX:1310/RX:1550, Single Mode, 10Km
GBM-123RS	GBM-123RS: 1000BASE-LX, Bi-Di SFP TX:1550/RX:1310, Single Mode, 10Km
GBM-104	GBM-104: 1000BASE-SX 1.25G, Multi-mode SFP, 500m

Dimension

