

# 9561-8GT4XS-TSN

Layer 3 Managed 8 x 10/100/1000 RJ45 &  
4 x 100/1G/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 100/1G/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.



**RoHS** **CE** **FC**



## 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.

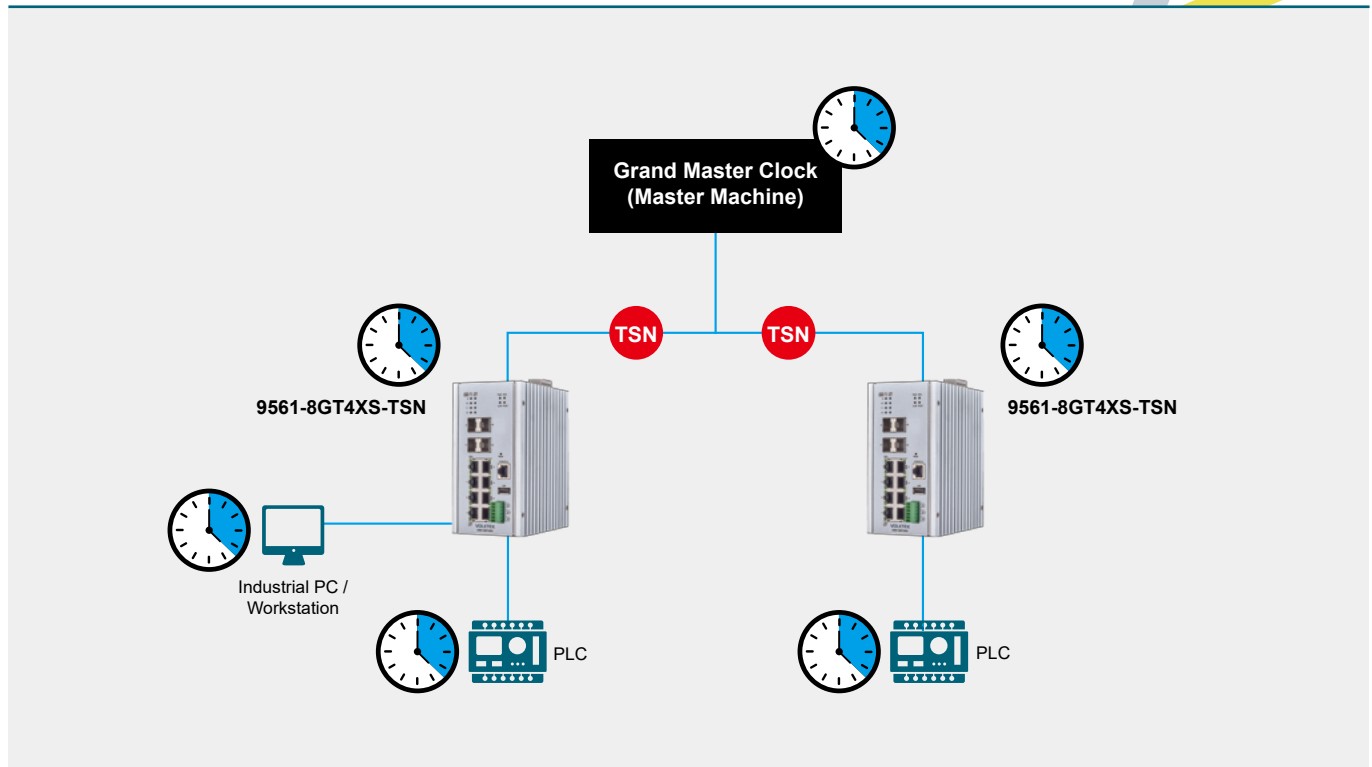
### Comprehensive Network Security

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.

## Applications



## Specifications

Standards		Interface		
IEEE 802.3	10BASE-T	Ports	4 x 100/1G/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	
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 802.1p	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
<b>Power</b>	
Input Voltage	Primary inputs: 12~48VDC Redundant Inputs: 12~48VDC
Power Consumption	System: 19W
<b>Mechanical and Environment</b>	
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	1,590 g (3.51 lb)
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.

<b>Certifications</b>	
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
<b>Ordering Information</b>	
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<b>Optional Accessories</b>	
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

