

9561-8GP4XS-TSN

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

Description

The 9561-8GP4XS-TSN is a managed industrial TSN switch featuring 8-port 10/100/1000BASE-T btPoE RJ45 interfaces and 4-slot FX/GbE/10G SFP+ uplinks. It also includes one RJ45 console port and one USB port for firmware upgrades and configuration maintenance. This switch is engineered and designed especially for harsh & extreme industrial applications, featuring high tolerance to vibration and shock, and a wide operating temperature range from -40°C to 70°C.

It supports advanced Power over Ethernet capabilities including btPoE (IEEE 802.3bt) delivering up to 90W, enabling power-hungry devices such as high-end IP cameras and wireless access points to be operated without additional power sources. The PoE management features allow per-port power monitoring, prioritization, and scheduling to optimize power distribution and efficiency.

Additionally, 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, enhance network reliability and security.

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.

Energy Efficient and Smart PoE Management

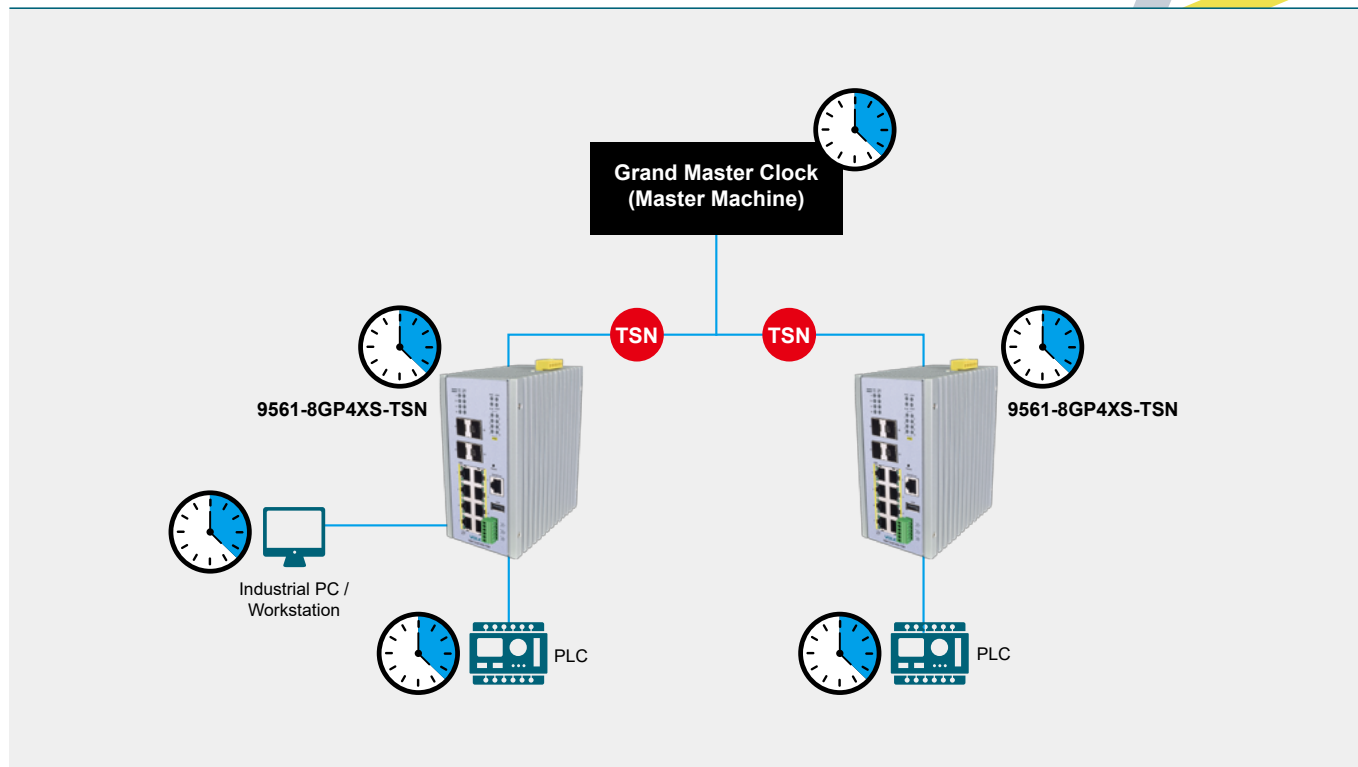
Compliant with IEEE 802.3af/at/bt standards, providing a total power budget of up to 360W and delivering up to 90W per port for data and power delivery to end devices on a single cable. Supports automatic power class detection, power priority, and feeding power budget control to optimize power delivery and reduce energy consumption.



RoHS **CE** **FC**



Applications



Specifications

Standards		Interface			
IEEE 802.3	10BASE-T	Ports	8 x 10/100/1000 btPoE Ports		
IEEE 802.3u	100BASE-TX		4 x FX/GbE/10G SFP+ Slots		
IEEE 802.3ab	1000BASE-T		1 x RS232 Console Port		
IEEE 802.3z	1000BASE-SX/LX		1 x USB Port		
IEEE 802.3ae	10GBASE-SR/LR/ER		2 x pairs Dry Contact Digital Inputs (DI)		
IEEE 802.3 Nway	Auto-negotiation		1 x Alarm Relay Digital output (DO)		
IEEE 802.3x	Flow Control	LED Panel	PWR, RPS, ALM, POST, 1000, 10G, LNK/ACT, PoE		
IEEE 802.3ad	Link Aggregation	Features			
IEEE 802.3af	Power over Ethernet (PoE)	Performance	Jumbo Frames Size: 16Kbytes		
IEEE 802.3at	Power over Ethernet Plus (PoE+)		MAC Table Entries: 16K		
IEEE 802.3bt	4-Pair PoE Type 3 / Type 4 (PoE++)		Switching Fabric: 56Gbps		
IEEE 802.3az	Energy Efficient Ethernet (EEE)		Forwarding Rate: 41.66Mpps		
IEEE 802.1AB	LLDP	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 802.1ad	QinQ		Reliability	STP/RSTP/MSTP, ERPS v1/v2, LACP, Static Trunk, Code redundancy, ITU-T G.8031, MRP, PRP, HSR	
IEEE 802.1D	STP			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 802.1w	RSTP				
IEEE 802.1s	MSTP				
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
PoE Functions	PoE Power On/OFF, PoE Priority, Feeding Power Budget Control, Power Class Detection
Power	
Input Voltage	Primary inputs: 48~57VDC Redundant Inputs: 48~57VDC
Power Consumption	System: TBD PoE Power Budget: 360W
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)

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.

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)
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	
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Optional Accessories	
Power Supply	SDR-480P-48: 240W 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

