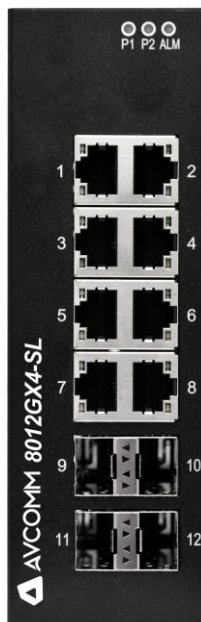# 8012GX4-SL Datasheet

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

AVCOMM Technologies, Inc

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Managed Industrial Ethernet Switch

8012GX4-SL

Industrial 12-port Gigabit Managed Ethernet Switch

AVCOMM 8012GX4-SL is full Gigabit Ethernet switch, providing 12 Gigabit Ethernet ports to update the existing network to a full gigabit speed infrastructure. A full Gigabit network provides higher overall throughput than a legacy Fast Ethernet network and reduce the response time for timing sensitive applications that may mix of video, voice and data in its traffic pipe. With the powerful features, 8012GX4-SL managed switch is easily to prioritize, partition and organize user's network and provide reliable and good quality services.

Full Gigabit	• Provide Gigabit Copper ports plus SFP ports 100FX or 1000BaseF (SX/LX/LH) – by model
	• 9K Jumbo frames
Managed	• L2 wire-speed switching engine
	• 8K MAC forwarding addresses
	• Network redundant LACP, Spanning tree STP, RSTP & MSTP, and quick Ring fail-over protection (< 20 ms)
VLAN Mirroring	• Port-based /tag-based VLAN, IEEE 802.1ad/QinQ VLAN, Add/remove VLAN tags,
	• Multicasting support IGMP v1/v2, proxy & snooping
Industrial Design	• Multicast/Broadcast/Flooding Storm Control
	• IEEE802.1x access control
	• Per VLAN mirroring
-40~75°C	• Dual power input (12~58 VDC) & Reverse power protection
	• DIN-Rail and Wall mounting option

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Ordering Information

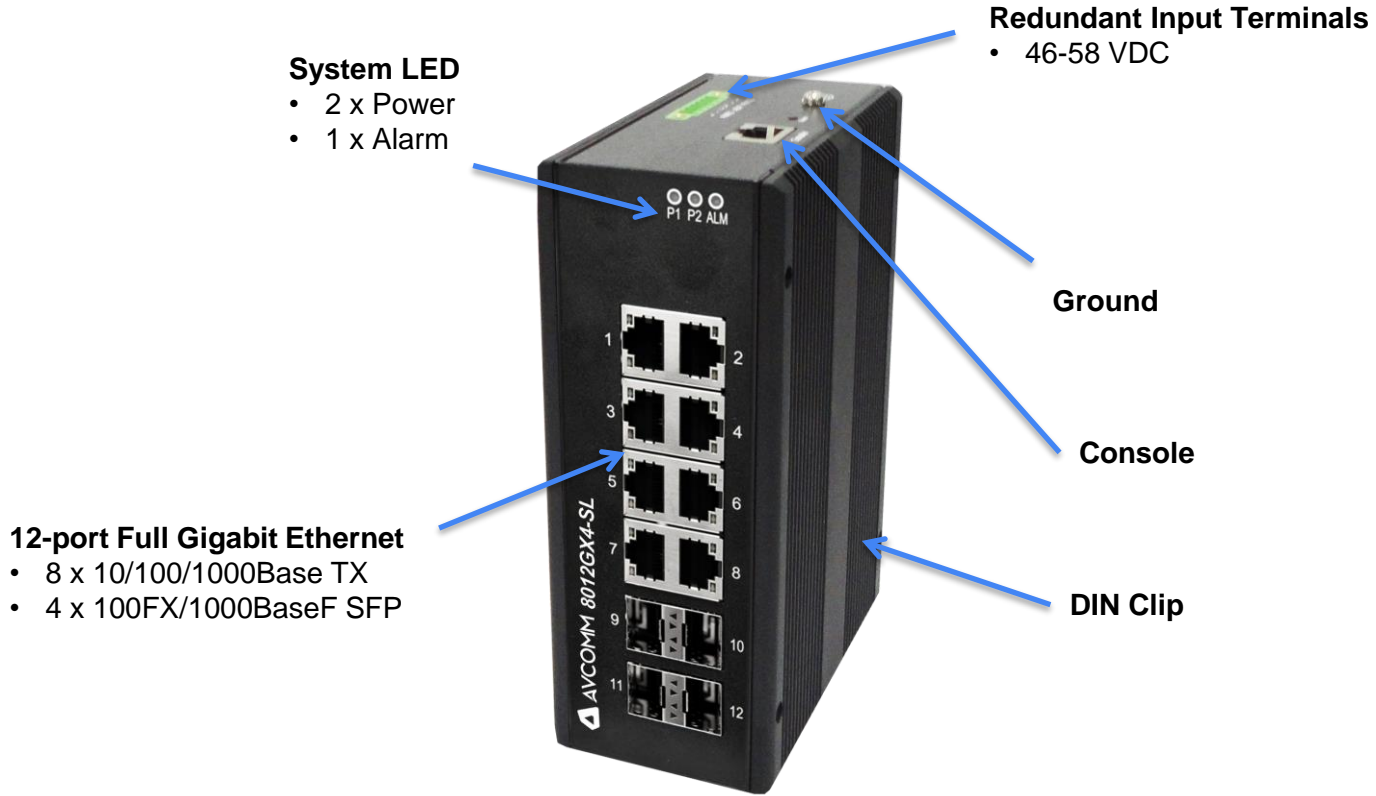| Model Name	Description
8012GX4-SL	Industrial 12-port Gigabit Managed Ethernet Switch, 8 x 10/100/1000BaseT(x) and 4 x 100/1000BaseSFP, DIN-Rail or Wall mounting , Dual Power Input 12-58 VDC, -40 to +75°C , IP30

Ethernet	
Operating mode	Store and forward, L2 wire-speed/non-blocking switching engine
MAC addresses	8K
Jumbo frames	9K Bytes

Copper RJ45 Ports	
Speed	10/100/1000 Mbps
MDI/MDIX auto-crossover	Support straight or cross wired cables
Auto-negotiating	10/100/1000 Mbps speed auto-negotiation; Full and half duplex
Ethernet isolation	1500 VRMS 1 minute

SFP (pluggable) Ports	
Port types supported	SFP (pluggable) Ports 100/1000BaseSFP slot Support 100FX SFP transceiver Support 100/1000BaseT SFP transceiver
Fiber port connector	LC typically for fiber (depends on module)
Optimal fiber cable	Typical 50 or 62.5/125 µm for multimode (mm); Typical 8 or 9/125 µm for single mode (sm)

Network Redundancy	
Fast failover protection rings	Link loss recovery < 20ms Support Single & Multiple rings
Spanning tree protocol	IEEE 802.1D STP, IEEE 802.1w RSTP, IEEE 802.1s MSTP
Port trunk with LACP	Static trunk or Dynamic via LACP (Link Aggregation Control Protocol)

Bridge, VLANs & Protocols	
Flow control	IEEE 802.3x (Full Duplex) and Back-Pressure(Half Duplex)
Max VLANs	1024
VLAN types	Port-based VLANs IEEE 802.1Q tag-based VLANs IEEE 802.1ad Double Tagging (Q in Q)
Multicast protocols	IGMP v1, v2 with up to 255 multicast groups IGMP snooping and querying Immediate leave and leave proxy Throttling and filtering
LLDP	IEEE 802.1ab Link layer Discovery Protocol (LLDP)

Traffic management & QoS	
Priority	IEEE 802.1p QoS
Number of queues per port	8
Scheduling schemes	SPQ, WRR
Traffic shaper	Port-based shaping

Security	
Port security	IP and MAC-based access control IEEE 802.1X authentication Network Access Control
Storm control	Multicast/Broadcast/Flooding Storm Control

Management	
User management interfaces	Cisco-like CLI (command line interface) ,WEB-based Management, SNMP v1, v2c and v3 Telnet (5 sessions)
Management security	HTTPs, SSH Radius Client for Management
Upgrade & Restore	HTTP/TFTP configuration import/export HTTP/TFTP firmware upgrade
Diagnostic	Syslog Per VLAN mirroring Ethernet Copper connection diagnostic tool SFP with DDM (Digital Diagnostic Monitoring) (*pending)
MIBs	RFC 1757 RMON 1,2,3,9; RFC 2674 Q-Bridge MIB RFC-1213 MIB-II; RFC-1493 Bridge MIB; RFC 2233 IF MIB
DHCP	Client, Server, Snooping, Relay Agent with Option 82
NTP/SNTP	Yes
System status	Device info/status, Ethernet port status
Power	
Power input	Redundant Input Terminals
Input voltage range	12-58 VDC
Reverse power protection	Yes
Transient protection	> 15,000 watts peak
Power consumption	Max. 14W
Indicators	
Power status indication	Indication of power input status
Ethernet port indication	Link & Speed
Environmental & Compliances	
Operating temperature range	40 to +75°C (cold startup at -40°C)
Storage temperature range	-40 to +85 °C
Humidity (non-condensing)	5 to 95% RH
Vibration, shock & freefall	IEC68-2-6, -27, -32
Certification compliance	CE/FCC/UL-508; EN-50121-4
Electrical safety	UL508/UL60950/CSA C22, EN61010-1, CE
Hazardous Locations	UL/cUL Class I, Division 2, Groups A, B, C, and D
EMC	FCC Part 15, CISPR 22 (EN55022) Class A IEC61000-4-2, -3, -4, -5, -6 (Level 3)
RoHS and WEEE	RoHS (Pb free) and WEEE compliant
MTBF	> 25 years
Mechanical	
Ingress protection	IP30
Installation option	DIN-Rail mounting, Wall mounting
Dimension	154mm(H) x 109mm(D) x 61mm(W)

100Base FX		
Multi Mode	AVC-SFP-FX-SX （550m）	Wavelength: 850 nm
	AVC-SFP-FX-S （2km）	Wavelength: 1310 nm
Single Mode	AVC-SFP-FX-10 (10km)	Wavelength: 1310 nm
1000Base FX		
Multi Mode	AVC-SFP-SX （550m）	Wavelength: 850 nm
	AVC-SFP-SX-D （2km）	Wavelength: 1310 nm
Single Mode	AVC-SFP-LX-10 (10km)	Wavelength: 1310 nm

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Function interface

Redundant Input Terminals
- 46-58 VDC

System LED
- 2 x Power
- 1 x Alarm

Ground

P1 P2 ALM

Console

AVCOMM 8012GX4-SL

12-port Full Gigabit Ethernet
- 8 x 10/100/1000Base TX
- 4 x 100FX/1000BaseF SFP

DIN Clip

Installation dimensions

Unit : mm

TOP VIEW
17.5 [0.7]
29.2 [1.1]

FRONT VIEW
61.0 [2.4]
11.1 [0.4]
40.4 [1.6]
9.0 [0.4]
154.0 [6.1]

SIDE VIEW
108.3 [4.3]
33.5 [1.3]
24.1 [0.9]
35.0 [1.4]

REAR VIEW
24.0 [0.9]
11.0 [0.4]
13.1 [0.5]
61.0 [2.4]
55.9 [2.2]
12.0 [0.5]

DIN-RAIL/PANEL MOUNTING KIT
M4 SCREW
38.1 [1.5]
48.0 [1.9]
172.0 [6.8]
25.0 [1.0]
35.0 [1.4]

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