



AVCOMM®

# 610GX2-POE Datasheet

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



AVCOMM Technologies, Inc

[www.avcomm.us](http://www.avcomm.us)

Email: [info@avcomm.us](mailto:info@avcomm.us)

Phone: (713) 933-4534

Address: 333 West Loop North, Suite 460  
Houston, TX 77024  
United States

## Building More Powerful Industrial POE Aggregation Network

### 610GX2-POE

#### Industrial 8G+2GSFP Managed PoE Switch

610GX2-POE is an industrial L2 smart managed PoE Ethernet Switch. Equipped with 8x 100M PoE Af/at and 2x 100M/1000M SFP or RJ45 multiplexing ports. The 8x100M PoE/PoE+ ports can feed IP cam or wireless AP up to 30W/port. The 610GX2-POE designs with the latest ERPS v2 ring which is fully compatible with commercial communication equipment for flexible network upgrade. The USB port for configuration file can help mass installation and site support. Wide operating temperature design (-40~70°C) can withstand harsh industrial environment. Improved production processes and precision ensure higher quality and stability. The ANMS supports network management for up to 2000 nodes.



#### High Throughput Ethernet Switching

- 10 Ethernet ports include 8x100M PoE Af/at ports and 2x 100M/1000M SFP or RJ45 multiplexing ports
- 8K MAC address table
- DDM function for fiber connectivity monitoring
- 9Kb Jumbo Frame
- Stores and Forwards with non-blocking Switch Fabric

#### Extreme PoE Capability

- Provides 8-port IEEE 802.3af/at compliance PoE, up to 30W per port
- Up to 240W PoE power budget
- Complete PoE management including per-port Power Budget Control, PoE Scheduling and PoE Status

#### Management Features

- Various configuration paths, including CGI WebGUI CLI, SNMP and RMON
- LLDP topology control
- Support Software Utilities:
  - ANMS
  - AIAS for Configuration Management
  - ATMS\*, ATMS OTA\* for Remote Management on Cloud\*
- USB for easy field side configuration and firmware update
- Support MQTT protocol, ready to use AWS/Azure and Private Cloud Agent for cloud management

#### Rugged Design for Security Surveillance

- Up to 240 W PoE power budget per port
- Wide operating temperature range: -40~70 °C Railway EMC: EN50121-4
- IEC61000-6-2/IEC61000-6-4 heavy industrial EMC

#### IEC62443-4-2 Level 3/4 Cyber Security

- 802.1Q VLAN, private VLAN, advanced port security
- Multi-level user authentication
- HTTPS/SSH/SFTP, 256-bit AES encryption
- 802.1x MAB for non-802.1x compliant end device connection authentication
- RADIUS/TACACS+ Centralized Password Authentication

#### ITU-T G.8032 v1/v2 ERPS Ring Redundancy

- An ITU standard Ring redundancy Protocol
- Provide sub-50ms protection and recovery switching for Ethernet traffic
- Interoperate with more industrial switch and remain fast recovery time
- Interoperate with commercial switch instead of STP/RSTP
- Efficient network interconnection with ERPS Chain, multiple chain

PoE (Power Over Ethernet) Details	PoE (IEEE 802.3af)	PoE+ (IEEE 802.3at)
Max power	15.40 W	34.20 W
Available power for the device	12.95 W	25.50 W
Voltage output range	44-58 VDC	50-57 VDC
Max output current	350 mA	600 mA
Power management level	L3	L4

## Ordering Information .....

Model Name	Description
<b>610GX2-POE</b>	10-Port Industrial Fully Managed POE Switch, 8 RJ45 10/100BaseT(X), 2 SFP Slots 1000BaseSFP+, Support POE/POE+, Support ITU-TG.8032, DIN-Rail, Dual Power Input 46-57VDC, -40°C-75°C
<b>610GX2-POE-2SX</b>	610GX2-POE, w/ 2 AVC-SFP-SX
<b>610GX2-POE-2LX-10</b>	610GX2-POE, w/ 2 AVC-SFP-LX-10
<b>610GX2-POE-2LX-40</b>	610GX2-POE, w/ 2 AVC-SFP-LX-40
<b>610GX2-POE-PS</b>	610GX2-POE, w/ 1 APS-240-48
<b>610GX2-POE-2SX-PS</b>	610GX2-POE, w/ 1 APS-240-48 and 2 AVC-SFP-SX
<b>610GX2-POE-2LX-10-PS</b>	610GX2-POE, w/ 1 APS-240-48 and 2 AVC-SFP-LX-10
<b>610GX2-POE-2LX-40-PS</b>	610GX2-POE, w/ 1 APS-240-48 and 2 AVC-SFP-LX-40

Technology	
<b>Standard</b>	IEEE 802.3 10Base-T Ethernet
	IEEE 802.3u 100Base-TX Fast Ethernet
	IEEE 802.3ab 1000Base-T Gigabit Ethernet copper
	IEEE 802.3u 100Base-FX Fast Ethernet Fiber
	IEEE 802.3x Flow Control and back-pressure
	IEEE 802.3ab 1000Base-T Gigabit Ethernet copper
	IEEE 802.1AB Link Layer Discovery Protocol (LLDP)
	IEEE 802.1p Class of Service (CoS)
	IEEE 802.1Q VLAN
	ITU-T G.8032 Ethernet ring protection switching (ERPS)
	IEEE 802.1D-2004 Rapid Spanning Tree Protocol (RSTP)
	IEEE 1588 Precision Time Protocol v1/2
Performance	
<b>Switch Technology</b>	Store and Forward Technology with Non-Blocking Switch Fabric
<b>Number of MAC Address</b>	8K
<b>Packet Buffer Memory</b>	1.5Mb
<b>IGMP Groups</b>	256
<b>Transfer Performance</b>	10Base-TX: 14,880pps, 100Base-TX/FX: 148,800pps, 1000Base-TX/FX: 1,488,100pps
<b>VLAN</b>	256 VLANs
<b>VLAN ID</b>	1~4094
<b>Class of Service</b>	4 Priority Queues per Port
Interface	
<b>Ethernet Port</b>	8 x 10/100Base-T RJ-45, Auto Negotiation 2 x 100/1000Base SFP, DDM
<b>System LED</b>	2 x Power: Green On 1x SYS: Ready: (Green On), Firmware Updating: (Green Blinking) 1 x DO: Red On 1 x DI: Green On 1 x Ring: Off: Ring disabled, Green On: Ring normal (Not RPL Owner), Green Blinking: Ring normal (RPL Owner), Amber On: Abnormal, Amber Blinking: Ring port fail 8 x PoE: Amber On
<b>Ethernet Port LED</b>	Link (Green On), Activity (Green Blinking), Speed 1000M (Brown On), Speed 100M (Off)
<b>SFP LED</b>	Link (Green On), Activity (Green Blinking), Speed 1000M (Brown On), Speed 100M (Off)
<b>Reset</b>	System Reset(2~6 Seconds) / Default Settings Reset(over 7 Seconds)
<b>Console</b>	1 x RS232 in RJ45 for System Configuration. Baud Rate: 115200.n.8.1
<b>USB</b>	1 x USB for Configuration/Firmware Update
<b>Watchdog</b>	Hardware Design 10 Second Timer
<b>Power Input, Digital Input, Digital Output</b>	8-Pin Removable Terminal Block Connector 4-pin Dual power input 4-pin DI, DO (Relay Alarm) Digital Output: Dry Relay output with 0.5A /24V DC Digital input: Digital input with photo-Coupler Isolation High: DC 11~30V Low: DC 0~10V

Power Requirement	
<b>Input Voltage</b>	48VDC(46~57VDC, 50~57VDC suggested for IEEE802.3at)
<b>Reverse Polarity Protect</b>	Yes
<b>Input Current</b>	4.63A@54VDC
<b>Power Consumption</b>	Max 9.18W@54VDC full traffic without PD Loading, suggest to reserve 15% tolerance
PoE	
<b>Power forwarding mode</b>	Alternative A
<b>PoE Power Budget</b>	System: Max. 240W@75°C Per Port: Max. 30W
<b>PoE Standard</b>	IEEE 802.3af/at
<b>Management</b>	System/Port Power Budget Control, PD Alive Check, PoE Scheduling, PoE Status
Software	
<b>Management Interface</b>	CGI WebGUI, Command Line Interface (CLI), Telnet, SNMP
<b>Time Management</b>	NTP, IEEE 1588 Precision Time Protocol v1/v2
<b>Network Management</b>	IPv4/IPv6, SNMP v1/v2c/v3/Trap, MIBs, RMON, LLDP, DHCP server/client/Option 82, TFTP, System Log, SMTP
<b>Traffic Management</b>	Flow Control, Port Trunk/802.3ad LACP, VLAN, Private VLAN, GVRP, GMRP, QinQ, QoS, IGMP Snooping v1/v2/v3, Rate Control, Storm Control, Port Mirror
<b>Security</b>	IEEE 802.1X/RADIUS, Private VLAN, ACL(MAC/IP filter), HTTPs/SSH secure login
<b>Redundancy</b>	Rapid Spanning Tree Protocol (RSTP)/Multiple Spanning Tree Protocol (MSTP) ITU-T G.8032 v1/v2 Ethernet Ring Protection Switching (ERPS)
Mechanical	
<b>Installation</b>	DIN Rail
<b>Enclosure Material</b>	Steel Metal with Aluminum
<b>Dimension</b>	82.2 mm x 160 mm x 125 mm (W x H x D) / without DIN Rail Clip
<b>Ingress Protection</b>	IP31
<b>Weight</b>	1.4kg (gear)/ 1.8kg (set)
Environmental	
<b>Operating Temperature &amp; Humidity</b>	-40°C~75°C , 0%~95% Non- Condensing
<b>Storage Temperature</b>	-40°C~85°C
<b>HI-Pot Insulation</b>	AC 1.5 KV
<b>MTBF</b>	>2,000,000 hours
<b>Warranty</b>	5 years
Standard	
<b>Safety</b>	IEC60950-1 Compliance
<b>EMC</b>	EN61000-6-2/EN61000-6-4
<b>EMI</b>	CISPR 22, FCC part 15B Class A
<b>EMS</b>	EN61000-4-2 ESD: 8KV(Air), 6KV(Contact) EN61000-4-3 RS: 20V/m(80M~1GHz), 10V/m(1.4G~2.1GHz), 5V/m(2.1G~2.5GHz) EN61000-4-4 EFT: 2KV (Power, Signal Port, GND) EN61000-4-5 Surge: Power: 2KV/1KV(Line to Ground/Line to Line), Signal Port: 2KV(Line to Ground) EN61000-4-6 CS: 10Vrms(Power, Signal Port) EN61000-4-8 Magnetic Field: 30A/m continues /300A for 1~3s
<b>Railway</b>	EN50121-4



## function interface

### Integrated Power Connector

- 1 x 8-pin removable terminal block
- 4 pin dual power input
- 2 needle DI
- 2 needles DO
- Easy installation

### System LED

- 8 x PoE
- 2 x Power
- 1 x System Status
- 1 x DI
- 1 x DO
- 1 x Ring
- 8 x Ethernet port
- 2 x SFP sport
- 2 x SFP 1000M

### Simple System Management

- USB port on-site setting or firmware update
- Set port of RS232

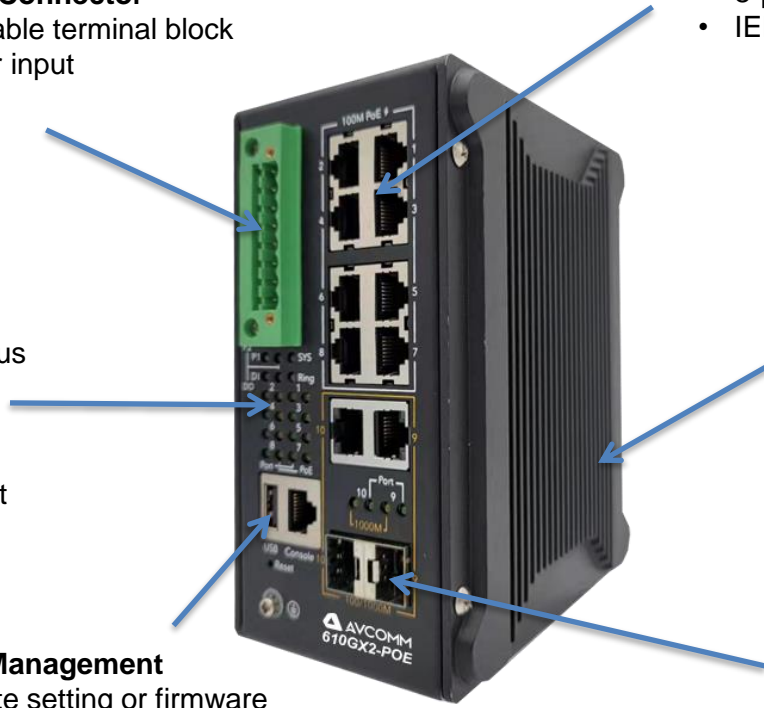
### 100 MB PoE Port

- 8-port 10/100MBase-TX
- IEEE 802.3 af/at PoE

### DIN Clip

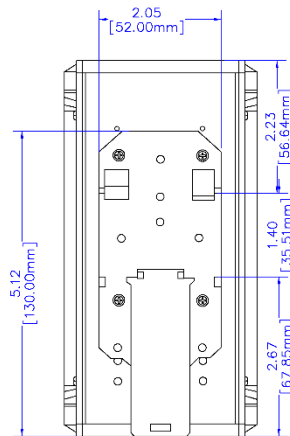
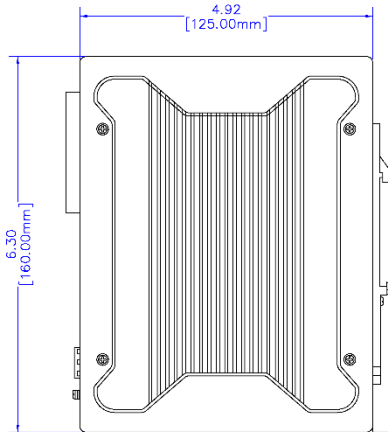
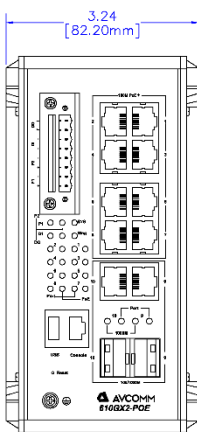
### Gigabit Fiber Port

- 2-port 100/1000M RJ45/SFP combo

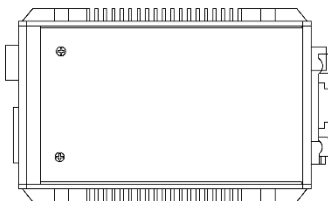


## Installation dimensions

Unit:  $\frac{\text{inch} \pm 0.040}{[\text{mm}] \pm 1.00}$



Top view



Bottom view

