610GX2-L3-POE Datasheet

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

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Building More Powerful Industrial POE Aggregation Network

610GX2-L3-POE

Industrial 8G+2GSFP Managed PoE Switch

610GX2-L3-POE is an industrial L3 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-L3-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 (-40~70ºC) 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

Smart Management

- 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 ºC
- 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

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Ordering Information

Model Name	Description
610GX2-L3-POE	10-Port Industrial Fully Managed Layer3 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
610GX2-L3-POE-2SX	610GX2-L3-POE，w/ 2 AVC-SFP-SX
610GX2-L3-POE-2LX-10	610GX2-L3-POE，w/ 2 AVC-SFP-LX-10
610GX2-L3-POE-2LX-40	610GX2-L3-POE，w/ 2 AVC-SFP-LX-40
610GX2-L3-POE-PS	610GX2-L3-POE，w/ 1 APS-240-48
610GX2-L3-POE-2SX-PS	610GX2-L3-POE，w/ 1 APS-240-48 and 2 AVC-SFP-SX
610GX2-L3-POE-2LX-10-PS	610GX2-L3-POE，w/ 1 APS-240-48 and 2 AVC-SFP-LX-10
610GX2-L3-POE-2LX-40-PS	610GX2-L3-POE，w/ 1 APS-240-48 and 2 AVC-SFP-LX-40

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Technology	
Standard	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	
Switch Technology	Store and Forward Technology with Non-Blocking Switch Fabric
Number of MAC Address	8K
Packet Buffer Memory	1.5Mb
IGMP Groups	256
Transfer Performance	10Base-TX: 14,880pps, 100Base-TX/FX: 148,800pps, 1000Base-TX/FX: 1,488,100pps
VLAN	256 VLANs
VLAN ID	1~4094
Class of Service	4 Priority Queues per Port
Interface	
Ethernet Port	8 x 10/100Base-T RJ-45, Auto Negotiation 2 x 100/1000Base SFP, DDM
System LED	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
Ethernet Port LED	Link (Green On), Activity (Green Blinking), Speed 1000M (Amber On), Speed 100M (Off)
SFP LED	Link (Green On), Activity (Green Blinking), Speed 1000M (Amber On), Speed 100M (Off)
Reset	System Reset(2~6 Seconds) / Default Settings Reset(over 7 Seconds)
Console	1 x RS232 in RJ45 for System Configuration. Baud Rate: 115200.n.8.1
USB	1 x USB for Configuration/Firmware Update
Watchdog	Hardware Design 10 Second Timer
Power Input, Digital Input, Digital Output	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

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Power Requirement	
Input Voltage	48VDC(46~57VDC, 50~57VDC suggested for IEEE802.3at)
Reverse Polarity Protect	Yes
Input Current	4.63A@54VDC
Power Consumption	Max 9.18W@54VDC full traffic without PD Loading, suggest to reserve 15% tolerance
PoE	
Power forwarding mode	Alternative A
PoE Power Budget	System: Max. 240W@75°C Per Port: Max. 30W
PoE Standard	IEEE 802.3af/at
Management	System/Port Power Budget Control, PD Alive Check, PoE Scheduling, PoE Status
Software	
Management Interface	CGI WebGUI, Command Line Interface (CLI), Telnet, SNMP
Time Management	NTP, IEEE 1588 Precision Time Protocol v1/v2
Network Management	IPv4/IPv6, SNMP v1/v2c/v3/Trap, MIBs, RMON, LLDP, DHCP server/client/Option 82, TFTP, System Log, SMTP
Traffic Management	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
Security	IEEE 802.1X/RADIUS, Private VLAN, ACL(MAC/IP filter), HTTPs/SSH secure login
Redundancy	Rapid Spanning Tree Protocol (RSTP)/Multiple Spanning Tree Protocol (MSTP) ITU-T G.8032 v1/v2 Ethernet Ring Protection Switching (ERPS)
L3/Routing	Dual WAN interface Routing: RIPv2, OSPFv2, static multicast routing*, VRRPv2 NAT: 1-1 NAT, NAPT (SNAT/DNAT), port forwarding, R-NAT*, TTDP* Firewalls: Stateful Inspection Firewall, DMZ, Modbus TCP/UDP Deep Inspection* VPN: IPSec, OpenVPN, DMVPN*, PPTP*, L2TP*, GRE*. Encryption includes DES/3 DES/AES128 AES256
Mechanical	
Installation	DIN Rail
Enclosure Material	Steel Metal with Aluminum
Dimension	82.2 mm x 160 mm x 125 mm (W x H x D) / without DIN Rail Clip
Ingress Protection	IP31
Weight	1.4kg (gear)/ 1.8kg (set)
Environmental	
Operating Temperature & Humidity	-40°C~75°C , 0%~95% Non- Condensing
Storage Temperature	-40°C~85°C
HI-Pot Insulation	AC 1.5 KV
MTBF	>2,000,000 hours
Warranty	5 years
Standard	
Safety	IEC60950-1 Compliance
EMC	EN61000-6-2/EN61000-6-4
EMI	CISPR 22, FCC part 15B Class A
EMS	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
Railway	EN50121-4

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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-LX-S （2km）	Wavelength: 1310 nm
Single Mode	AVC-SFP-LX-10 (10km)	Wavelength: 1310 nm

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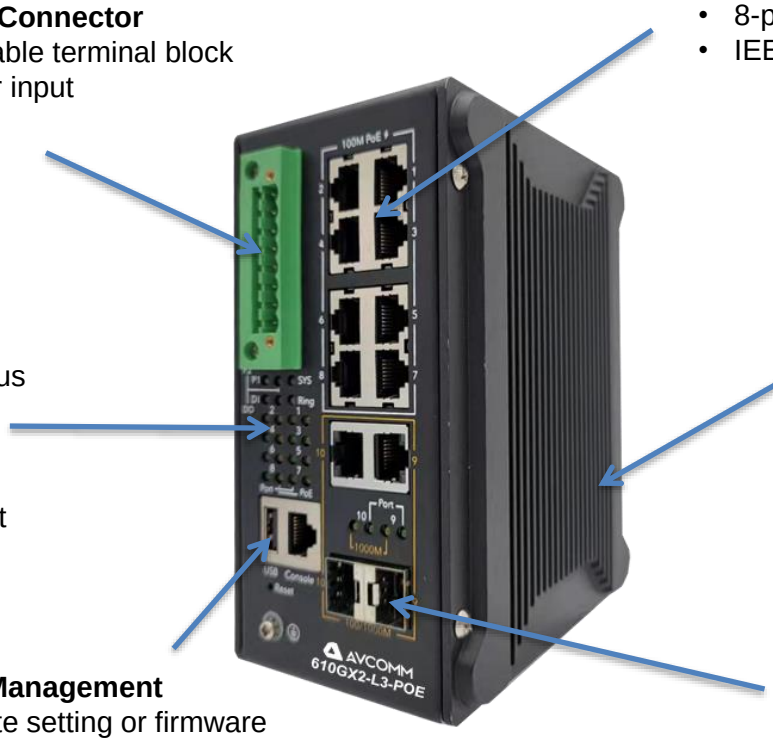
function interface

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

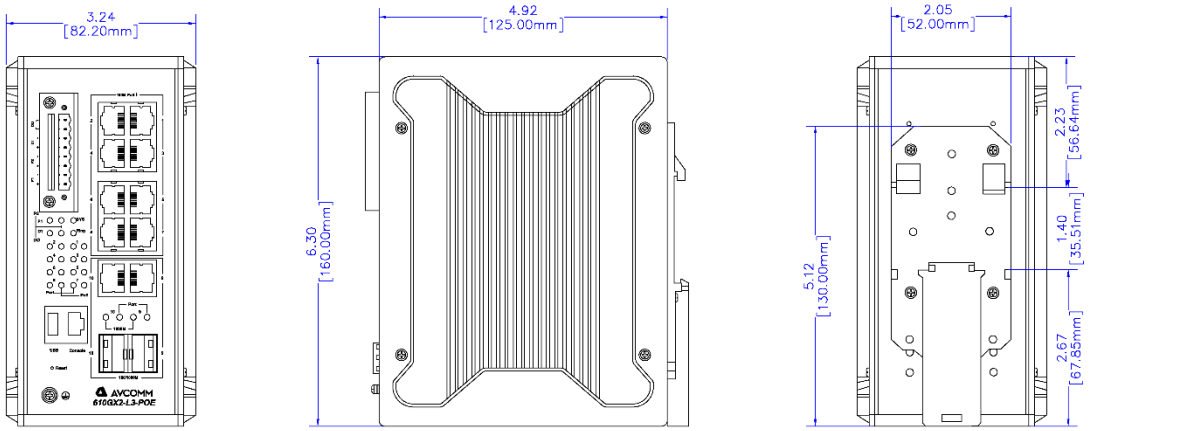


DIN Clip

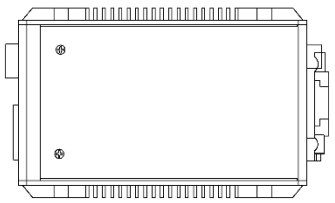
Gigabit Fiber Port
- 2-port 100/1000M RJ45/SFP combo

Installation dimensions

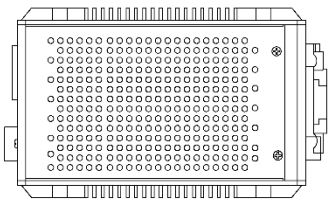
Unit: inch ±0.040 [mm] ±1.00



Top view



Bottom view



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