



# 8028GX28-L3

## Datasheet

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



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## Layer 3 Switch with Cyber Security and Enhanced ERPS v2 for Critical Applications

### 8028GX28-L3

#### Industrial 28-port L3 Rackmount Managed Ethernet Switch

AVCOMM 8028GX28-L3 is rack-mount type Ethernet switches, equipped with 4 x10G ports & 24 Gigabit Ethernet ports. With flexible combination of copper and fiber port options, 8028GX28-L3 delivers high quality, wire-speed L3 routing performance, advanced features such as powerful VLAN operation, Police-based traffic manage & security, and intelligent management design, to fulfill different application scenario. It provides the scalability, flexibility & reliability for large network structure, and is also an ideal solution of L3 routing off-load for core network.



**10G Switch**

**Advanced QoS**

**L3 switch**

**IEC 61850  
IEEE 1613**

**Multiple Fiber ports**

- Up to 24x100/1000BaseSFP slots plus 4x10G SFP+ slots.
- 9K Jumbo frames
- L3 wire-speed switching
- Network redundant LACP, Spanning tree STP, RSTP & MSTP, and quick Ring fail -over protection (< 20 ms)
- Support Single & multiple rings
- Advanced VLAN operations: IEEE 802.1ad/QinQ VLAN, VLAN tag add/remove/replace
- Private VLAN, port-based /tag-based/protocol-based VLAN
- Multicasting support IGMP v1/v2/v3, proxy & snooping
- Security: IEEE 802.1x authentication, RADIUS & TACACS+ AAA (pending)
- Policy-based traffic control engine for actions of Deny, Allow, Queue mapping, rate limit, mirror, or CoS remark on any combination of specific Layer -2 /Layer- 3 / Layer-4 patterns
- QoS (SPQ,WRR, SPQ+ WRR): Hierarchical per-port, per queue shaping & scheduling with bandwidth management
- IEC 61850-3 / IEEE 1613 compliant



## Ordering Information

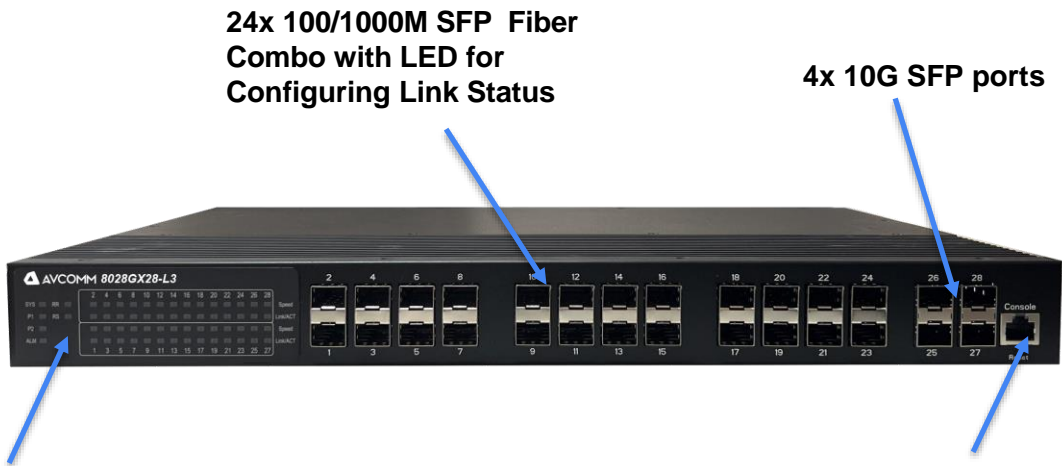
Model Name	Description
<b>8028GX28-L3-AC2</b>	28-Port Fully Managed Layer3 Industrial Ethernet Switch, 4 Slots 10GBaseSFP+, 24 Slots 1000BaseSFP+, Rack Mounting, Dual Power Input 90-264VAC, -40°C-75°C
<b>8028GX28-L3-AC2-12TX-12LX-10</b>	8028GX28-L3-AC2, w/ 12 AVC-SFP-TX and 12 AVC-SFP-LX-10
<b>8028GX28-L3-AC2-10TX-14LX-10</b>	8028GX28-L3-AC2, w/ 10 AVC-SFP-TX and 14 AVC-SFP-LX-10
<b>8028GX28-L3-AC2-6TX-18LX-10</b>	8028GX28-L3-AC2, w/ 6 AVC-SFP-TX and 18 AVC-SFP-LX-10
<b>8028GX28-L3-AC2-12TX-12SX</b>	8028GX28-L3-AC2, w/ 12 AVC-SFP-TX and 12 AVC-SFP-SX
<b>8028GX28-L3-AC2-10TX-14SX</b>	8028GX28-L3-AC2, w/ 10 AVC-SFP-TX and 14 AVC-SFP-SX
<b>8028GX28-L3-AC2-6TX-18SX</b>	8028GX28-L3-AC2, w/ 6 AVC-SFP-TX and 18 AVC-SFP-SX

<b>Ethernet</b>	
<b>Ethernet Interface</b>	100/1000BaseSFP slots or 10/100/1000BaseT(X) for 24 gigabit ports 10G SFP+ slots (1G SFP backward compatible)
<b>Operating mode</b>	Store and forward, L3 wire-speed/non-blocking switching engine
<b>MAC addresses</b>	8K
<b>Jumbo frames</b>	9K Bytes
<b>Copper RJ45 Ports</b>	
<b>Speed</b>	10/100/1000 Mbps
<b>MDI/MDIX Auto-crossover</b>	Support straight or cross wired cables
<b>Auto-negotiating</b>	10/100/1000 Mbps speed auto-negotiation; Full and half duplex
<b>SFP (pluggable) Ports</b>	
<b>Port types supported</b>	Gigabit fiber multimode, fiber single mode, fiber long-haul single mode 100/1000BaseF (SX/LX/LH)
<b>Fiber port connector</b>	LC typically for fiber (depends on module)
<b>10G SFP+</b>	1G/2.5G/10G SFP+ slots
<b>Network Redundancy</b>	
<b>Ring Protection</b>	Link loss recovery < 20ms Single & Multiple rings supported
<b>Spanning Tree Protocol</b>	IEEE 802.1D STP, IEEE 802.1w RSTP, IEEE 802.1s MSTP BPDU forwarding and filtering
<b>IEEE 802.3ad Port Trunk with LACP</b>	Static trunk (Link Aggregation Control Protocol)
<b>Bridge, Virtual Local Area Networks (VLANs) &amp; Protocols</b>	
<b>Flow control</b>	IEEE 802.3x (Full Duplex) and Back-Pressure(Half Duplex)
<b>Max VLANs</b>	2048
<b>VLAN Types</b>	Port-based VLANs, IEEE 802.1Q tag-based VLANs, IEEE 802.1v protocol-based VLANs, IEEE 802.1ad Double Tagging (Q in Q) Private VLAN
<b>VLAN operations</b>	Attach/Remove/Replacement VLAN tag
<b>MVR (Multicast VLAN Registration)</b>	Yes
<b>Multicast protocols</b>	IGMP v2 and v3 with up to 512 multicast groups IGMP snooping and proxy Immediate leave and leave proxy
<b>Traffic management engine &amp; QoS</b>	
<b>Policy-based access control engine</b>	Policy/Profile-based Access Control List (ACL) Multi-layer ACL support; Flexible combination of well-known Layer 2/3/4 fields:

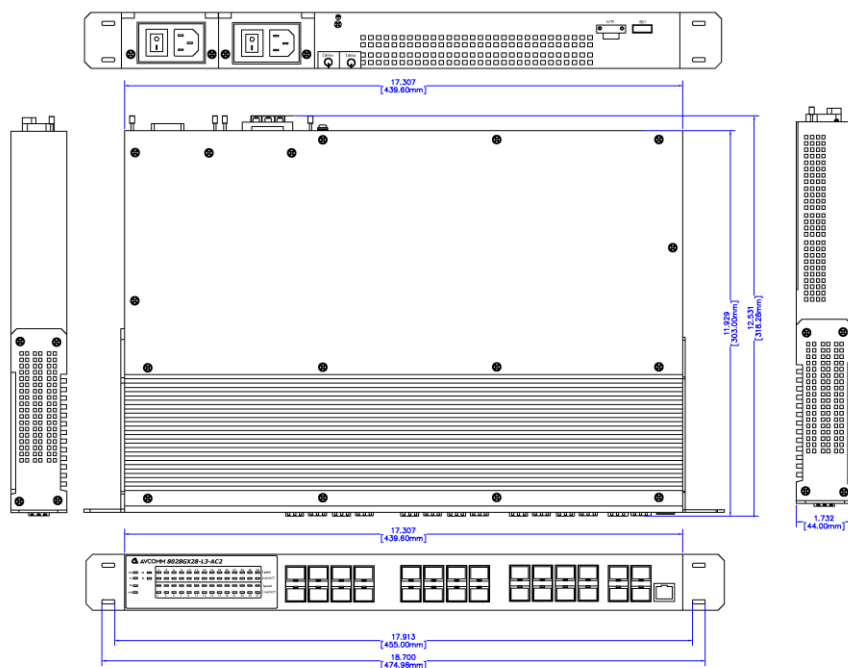
	<ul style="list-style-type: none"> <li>-VLAN ID, Source/Destination MAC address, EtherType</li> <li>-Source/Destination IP address, IP protocol number</li> <li>-UDP or TCP, Source/Destination port number of TCP/UDP</li> <li>-DSCP or ToS value</li> </ul> Actions per rule: Deny, Allow, Queue mapping, rate limit, mirror, CoS remark Max number of profiles per switch: 20 Max number of rules per profile: 32
<b>Number of queues per port</b>	8
<b>Scheduling schemes</b>	SPQ, WRR, SPQ + WRR
<b>Traffic Shaper</b>	Hierarchical per port and per queue shaping & scheduling with bandwidth management
<b>Traffic Policer</b>	Ingress rate limit in 1K bps granularity
	TrTCM (Two Rate Three Color Marker) policer engine
<b>Security</b>	
<b>Port security</b>	IP and MAC-based Access control; Policy-based Access control IEEE 802.1X authentication Network Access Control RADIUS Client for IEEE 802.1X.
<b>Storm Control</b>	Multicast/Broadcast/Flooding Storm Control per port/per VLAN basis
<b>Management</b>	
<b>User Management interfaces</b>	Cisco-like CLI (command line interface); Telnet (5 sessions) WEB-based Management SNMP v1, v2c, v3 Telnet (5 sessions)
<b>Management Security</b>	HTTPs, SSH Radius Client for Management (*pending) TACACS+ Client for Management (*pending)
<b>Upgrade &amp; Restore</b>	FTP for Configuration Import/Export, FTP for Firmware Upgrade
<b>Layer 3</b>	Router: RIPv2, OSPFv2, Static Multicast Routing, DVMPR*, PIM*, VRRPv2 NAT: 1-1 NAT*, NAPT*, R-NAT*, TTDP* Firewall: Stateful Inspection Firewall, DMZ* VPN: IPSec, OpenVPN
<b>Diagnostic</b>	Syslog Policy-based stream mirroring Ethernet Copper connection diagnostic tool
<b>SNTP</b>	Yes
<b>Power</b>	
<b>Power input options</b>	DC input: DC Redundant Input Terminals & Reverse power protection Single/dual AC inputs DC & AC dual inputs
<b>Input voltage range</b>	20-58 VDC or 100/240 VAC, 50Hz ~ 60Hz
<b>Indicators</b>	
<b>Status indication</b>	Indication of power input, alarm and Ring statuses
<b>Ethernet port indication</b>	Link & Speed

Environmental and Compliances		
<b>Operating temperature range</b>	-40 to +75°C	
<b>Storage temperature range</b>	-40 to +85 °C	
<b>Humidity (non-condensing)</b>	5 to 95% RH	
<b>EMI</b>	Radiated Emission: CISPR 22, EN55022 Class A Conducted Emission: EN55022 Class A	
<b>EMS</b>	ESD: IEC61000-4-2 Radiated RF (RS): IEC61000-4-3 EFT: IEC61000-4-4 Surge: IEC61000-4-5 Conducted RF (CS): IEC61000-4-6	
<b>RoHS and WEEE</b>	RoHS (Pb free) and WEEE compliant	
<b>MTBF</b>	> 25 years	
Mechanical		
<b>Ingress protection</b>	IP40	
<b>Dimensions</b>	439.6 (W) x 44 (H) x 318.3 (D) mm (maximum)	
<b>Weight</b>	4.5KG	
<b>Installation option</b>	19", 1U rack mounting	
100Base FX		
<b>Multi Mode</b>	AVC-SFP-FX-SX (550m)	Wavelength: 850 nm
	AVC-SFP-FX-S (2km)	Wavelength: 1310 nm
<b>Single Mode</b>	AVC-SFP-FX-10 (10km)	Wavelength: 1310 nm
1000Base FX		
<b>Multi Mode</b>	AVC-SFP-SX (550m)	Wavelength: 850 nm
	AVC-SFP-LX-S (2km)	Wavelength: 1310 nm
<b>Single Mode</b>	AVC-SFP-LX-10 (10km)	Wavelength: 1310 nm

## Function interface



## Installation dimensions



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