



AVCOMM®

8028GX28

Datasheet

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



AVCOMM Technologies, Inc

www.avcomm.us

Email: info@avcomm.us

Phone: (713) 933-4534

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

Rackmount Ruggedized 28G Ethernet Switch

8028GX28

Industrial 28-port L2 Rackmount Managed Ethernet Switch

AVCOMM 8028GX28 are rack-mount type Ethernet switches, equipped with 4 x10G ports & 24 Gigabit Ethernet ports. With flexible combination of copper and fiber port options, 8028GX28 delivers high quality, wire-speed L2 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 L2 routing off-load for core network.



10G Switch

Advanced QoS

L2 switch

**IEC 61850
IEEE 1613**

Multiple Fiber ports

- Up to 24 100/1000BaseSFP slots plus 4 10G SFP+ slots.
- Gigabit ports options: 24 10/1000Base SFP slots, or 8 Gigabit Copper ports plus 16 100/1000BaseSFP slots, or 16 Gigabit Copper ports plus 8 100/1000BaseSFP slots, or 24 10/100/1000BaseT copper ports.
- 9K Jumbo frames
- L2 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

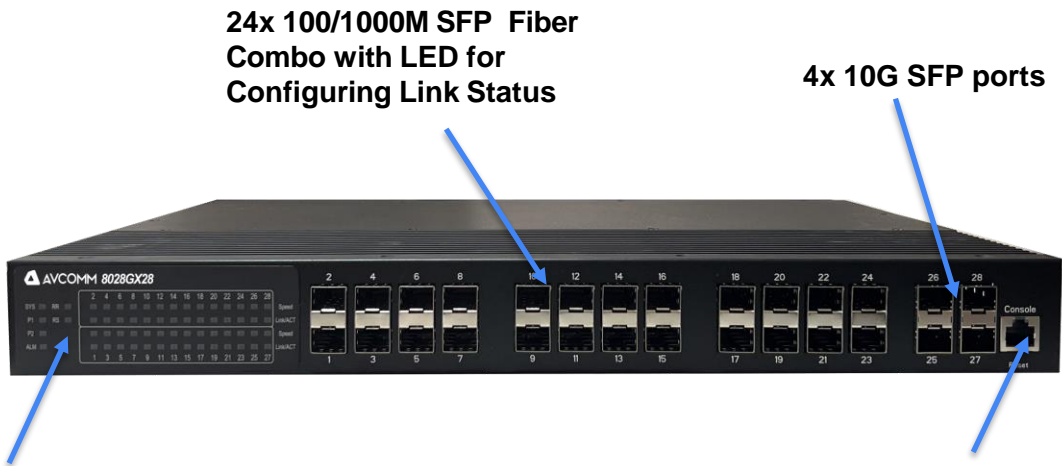
Model Name	Description
8028GX28-AC2	28-Port Fully Managed Industrial Ethernet Switch, 4 Slots 10GBaseSFP+, 24 Slots 1000BaseSFP+, Rack Mounting, Dual Power Input 90-264VAC, -40°C-75°C
8028GX28-AC2-12TX-12LX-10	8028GX28-AC2, w/ 12 AVC-SFP-TX and 12 AVC-SFP-LX-10
8028GX28-AC2-10TX-14LX-10	8028GX28-AC2,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

Ethernet	
Ethernet Interface	100/1000BaseSFP slots or 10/100/1000BaseT(X) for 24 gigabit ports 10G SFP+ slots (1G SFP backward compatible)
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
SFP (pluggable) Ports	
Port types supported	Gigabit fiber multimode, fiber single mode, fiber long-haul single mode 100/1000BaseF (SX/LX/LH)
Fiber port connector	LC typically for fiber (depends on module)
10G SFP+	1G/2.5G/10G SFP+ slots
Network Redundancy	
Ring Protection	Link loss recovery < 20ms Single & Multiple rings supported
Spanning Tree Protocol	IEEE 802.1D STP, IEEE 802.1w RSTP, IEEE 802.1s MSTP BPDU forwarding and filtering
IEEE 802.3ad Port Trunk with LACP	Static trunk (Link Aggregation Control Protocol)
Bridge, Virtual Local Area Networks (VLANs) & Protocols	
Flow control	IEEE 802.3x (Full Duplex) and Back-Pressure(Half Duplex)
Max VLANs	2048
VLAN Types	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
VLAN operations	Attach/Remove/Replacement VLAN tag
MVR (Multicast VLAN Registration)	Yes
Multicast protocols	IGMP v2 and v3 with up to 512 multicast groups IGMP snooping and proxy Immediate leave and leave proxy
Traffic management engine & QoS	
Policy-based access control engine	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"> -VLAN ID, Source/Destination MAC address, EtherType -Source/Destination IP address, IP protocol number -UDP or TCP, Source/Destination port number of TCP/UDP -DSCP or ToS value 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
Number of queues per port	8
Scheduling schemes	SPQ, WRR, SPQ + WRR
Traffic Shaper	Hierarchical per port and per queue shaping & scheduling with bandwidth management
Traffic Policer	Ingress rate limit in 1K bps granularity
	TrTCM (Two Rate Three Color Marker) policer engine
Security	
Port security	IP and MAC-based Access control; Policy-based Access control IEEE 802.1X authentication Network Access Control RADIUS Client for IEEE 802.1X.
Storm Control	Multicast/Broadcast/Flooding Storm Control per port/per VLAN basis
Management	
User Management interfaces	Cisco-like CLI (command line interface); Telnet (5 sessions) WEB-based Management SNMP v1, v2c, v3 Telnet (5 sessions)
Management Security	HTTPs, SSH Radius Client for Management (*pending) TACACS+ Client for Management (*pending)
Upgrade & Restore	FTP for Configuration Import/Export, FTP for Firmware Upgrade
Diagnostic	Syslog Policy-based stream mirroring Ethernet Copper connection diagnostic tool
SNTP	Yes
Power	
Power input options	DC input: DC Redundant Input Terminals & Reverse power protection Single/dual AC inputs DC & AC dual inputs
Input voltage range	20-58 VDC or 100/240 VAC, 50Hz ~ 60Hz
Indicators	
Status indication	Indication of power input, alarm and Ring statuses
Ethernet port indication	Link & Speed
Environmental and Compliances	
Operating temperature range	-40 to +75°C
Storage temperature range	-40 to +85 °C

Humidity (non-condensing)	5 to 95% RH
EMI	Radiated Emission: CISPR 22, EN55022 Class A Conducted Emission: EN55022 Class A
EMS	ESD: IEC61000-4-2 Radiated RF (RS): IEC61000-4-3 EFT: IEC61000-4-4 Surge: IEC61000-4-5 Conducted RF (CS): IEC61000-4-6
RoHS and WEEE	RoHS (Pb free) and WEEE compliant
MTBF	> 25 years
Mechanical	
Ingress protection	IP40
Dimensions	439.6 (W) x 44 (H) x 318.3 (D) mm (maximum)
Weight	4.5KG
Installation option	19" rack mounting

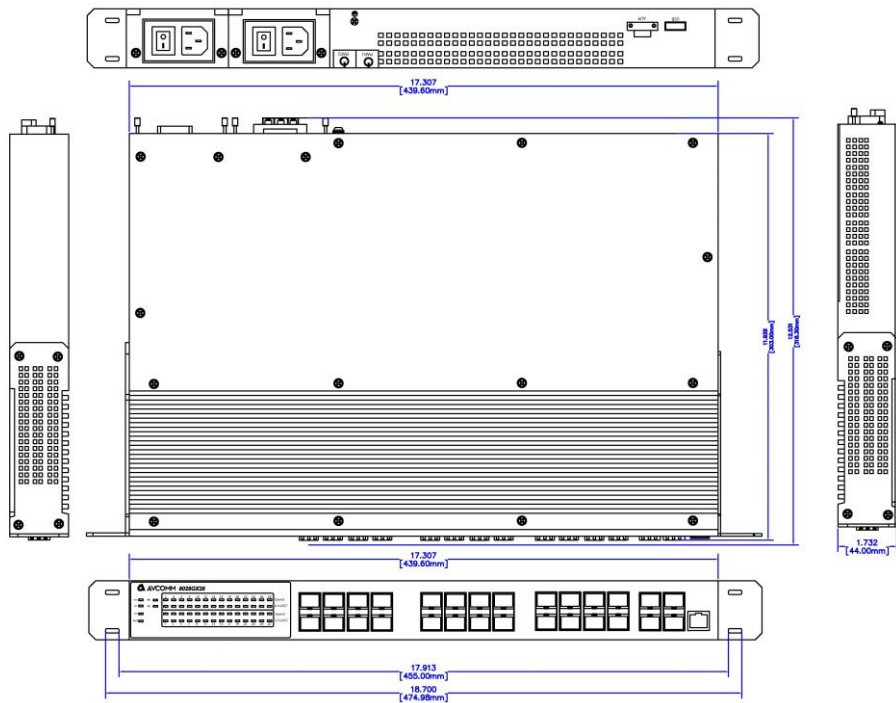
Function interface



System LED:

- Power, System & Ring status

Installation dimensions



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