



7024GX12

Datasheet

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



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High Density of Interface with 12 Ethernet & 12 SFP ports.

7024GX12

Industrial 24-port Fully Gigabit Managed DIN-Rail High Density Interface with 12 Ethernet and 12 SFP ports.

7024GX12 is built for high speed and traffic application for Industrial network, which backplane bandwidth is up to 52Gbps. Its high density of interface brings 24 ports, including 12 SFP for fiber ports, with still DIN-Rail installation.

Based on patented A-Ring® Loop Protection technology, its hardware-based algorithm ensures less than 5ms self-recovery time of every node and less than 50ms self-recovery time of the network.

The fan-less design comes with an isolated redundant power supply to increase system reliability and the availability of trunk network .

By unique extended industrial-grade design and technology, it is suitable for various harsh environments and outdoor applications.



Features & Benefits

High performance CPU & Full Gigabit Switching

- 52Gbps Bandwidth Non-blocking switch fabric design
- 24-port Full Gigabit Ethernet ports, including 12 Gigabit RJ45 and 12 100/1000M SFP.
- 8 flexible Class of Service (CoS) queues
- 8K MAC address table
- 9Kb Jumbo Frame
- Fiber ports support both 100M and 1000M SFP
- DDM function for fiber connectivity monitoring
- Up to 15Gbps Link Aggregation with 2.5G* SFP
- Energy-Efficient Ethernet for power saving

ITU ERPSv2 PLUS Ring Technology

- ITU G.8032 v1/v2 ERPS Ring Redundancy & HW-based CFM for quick acknowledgement while GbE copper link failure, providing 20ms recovery time and seamless restoration.
- ERPSv2 available to replace legacy Ring + Chain + Dual Homing
- Inter-Operability with 3rd party industrial switch and remain fast recovery time.
- Support Enhanced RSTP for large ring network topology with up to 80 switches

L2+ Management Switch Features

- Various configuration paths, including Web GUI, CLI, SNMP, Modbus TCP, LLDP topology control
- Layer 2 Switch features include VLAN, QoS, LACP/Trunk, Rapid Spanning Tree protocol etc.
- IGMP Snooping v1/v2/v3, IGMP Query, 512 L2 Multicast Groups for video applications
- Built-in DHCP Server that automatically provides and assigns IP addresses, default gateways to clients
- ANMS Network Management System

Rugged Design for Wayside Network Switching with Wide Power Input Range

- **10~60V** wide power range design with redundant power input
- Excellent heat dissipation design for operating in **-40~85°C** environments
- High level **EMC protection** exceeding traffic control and heavy industrial standards' requirements
- IEC 61000-6-2/4 Heavy Industrial Environment
- EN50121-4 railway trackside EMC compliance

Ordering Information

Model	Description
7024GX12	24-Port Industrial Ethernet Switch, 12 10/100/1000BaseTX, 12 100/1000 BaseFX SFP (SFP module not included) , Isolated Dual Power Inputs (9.6 ~ 60VDC), IP40 Protection Class.
7024GX12-12LX-10	24-Port Industrial Ethernet Switch, 12 10/100/1000BaseTX, 12 100/1000 BaseFX SFP (SFP module not included) , Isolated Dual Power Inputs (9.6 ~ 60VDC), IP40 Protection Class. With 12 AVC-SFP-LX-10-D
AVC-SFP-LX-10-D	1G SFP optical port module, single-mode 10km, wide temperature, DDM
AVC-SFP-SX-D	1G SFP Optical port module, multimode 2km, wide temperature, DDM
APS-30-24	Industrial power supplier, 1.5A@24VDC

 Specifications

Technology	
Standard	IEEE 802.3 10Base-T Ethernet
	IEEE 802.3u 100Base-TX Fast Ethernet
	IEEE 802.3u 100Base-FX Fast Ethernet Fiber
	IEEE 802.3z Gigabit Ethernet Fiber
	IEEE 802.3x Flow Control and back-pressure
	IEEE 802.3az (Energy Efficient Ethernet)
	IEEE 802.1p Class of Service (CoS)
	IEEE 802.1Q VLAN and GVRP
	IEEE 802.1AB Link Layer Discovery Protocol (LLDP)
	IEEE 802.1D-2004 Rapid Spanning Tree Protocol (RSTP)
	IEEE 802.1S Multiple Spanning Tree Protocol (MSTP)
	IEEE 801.1AX/802.3ad Link Aggregation Control Protocol (LACP)
	IEEE 802.1x Port based Network Access Protocol
	RFC 1059&1119 NTPv1/v2
	ITU-T G.8032 version 2 Ethernet ring protection switching(ERPSv2)
	RFC 1112 Host Extensions to IGMP IP Multicast RFC 2236 IGMPv2 Internet Group Management Protocol v2
	RFC 213 DHCP Server DHCP Server RFC 3046 DHCP Relay Agent Information Option
	RFC 1191 Path MTU Discovery Path MTU Discovery RFC 1765 OSPF Database Overflow OSPF database overflow RFC 2370 The OSPF Opaque LSA Option OSPF protocol LSA option
	RFC 2139 RADIUS Accounting Remote User Dial-Up Accounting System RFC 2865 Remote Authentication Dial in User Service (RADIUS) Remote Dial Authentication Service
Performance	
Switch Technology	Store and Forward Technology with Non-Blocking Switch Fabric Internal Packet Buffer: 4Mb Forwarding rate: 14.88Mpps/10-port (1,488,000pps/Gigabit port)
Backplane Bandwidth	52 Gbps
Number of MAC Address	8K
Jumbo Frame	9216 Bytes
VLAN	256 VLANs, VLAN ID 1~4094
IGMP Groups	512
Traffic Prioritize	8 Priority Queues per Port

 Specifications

Interface	
Ethernet Port	12 x 10/100/1000Base-T RJ45, Auto-Negotiation, Auto MDI/MDIX, 12 x 100/1000M SFP, 2.5G SFP compliant(TBD)
System LED	2 x Power: Green On 1 x DO/Alarm: Red On
Ethernet Port LED	Link (Green On), Activity (Green Blinking), Speed 1000M(Amber On), Speed 100M (Off)
SFP LED	Port: Link (Green On), Activity (Green Blinking); 1000M: Speed 1000M (Amber On), Speed 100M (Off)
Reset	System Reboot(2-6 Seconds)/Default Settings Reset(over 7 Seconds)
Console	1 x RS232 in RJ45 for System Configuration. Baud Rate: 115200.n.8.1, Pin Define: 3: TxD, 6:RxD, 5:GND *Also available to support Pin Define: 3: RxD, 4:TxD, 6:GND (Configured by Internal Jumper)
Software	
Management	Web, Serial Port, STD-17 MIB-II, STD-58 SMIv2, STD-59 RMON, STD-62 SNMPv3, SNMPv2c, SNMPv1, RFC2668 MAU, RFC2925 Ping MIB, MRD Private MIBs, SSH, HTTPS, Telnet
Diagnostic	LEDs, log files, relays, RMON, port mirroring, TRAP
Redundancy	STP, MSTP, RSTP, link aggregation
Time Management	NTP
Others	4K VLANs, IPv4/IPv6 multicast, storm control, support Jumbo Frame
Power parameters	
Terminal block	1 detachable 5-pin terminal block
Input voltage	9.6 ~ 60VDC, dual inputs
Over-current protection	available
Reverse Polarity Protect	available
Mechanical Specifications	
Dimension (WxHxD)	130mm*40mm*10mm
Ingress Protection	IP40
Weight	1.5 kg (Maximum)
Environment limits	
Storage temperature	-40°C ~ +85°C
Operation temperature	-40°C ~ +85°C
Ambient relative humidity	5% ~ 95%, no condensing

Specifications

Mechanical Specifications		
Vibration	IEC 60068-2-6	
Shock	IEC 60068-2-27	
Freefall	IEC 60068-2-31	
PCB	conform to IPC	
Electromagnetic		
Electromagnetic Radiation	FCC 47 CFR Part 15 Class A EN55022 Class A	
Electromagnetic Compatibility (EMC)	IEC(EN)61000-4-2, Class 4 IEC(EN)61000-4-3, Class 3 IEC(EN)61000-4-4, Class 4 IEC(EN)61000-4-5, Class 4 IEC(EN)61000-4-6, Class 3 IEC(EN)61000-4-9, Class 5	
Certificates		
Product Safety	CE,CB,IEC,IECEE IEC/EN62368-1 FCC Part 15 Subpart B Class A IEC/EN55022 Class A	
Hazardous Area	UL/cUL1604 Class 1 Division 2 (pending)	
Transportation Industry	JT/T817-2011; NEMA-TS2 (pending)	
Rail Industry	EN50121-4	
Power Industry	IEC61850-3 IEEE1613 (C37.90.x)	
Industrial Control Industry	UL/cUL61010 (pending)	
Shipbuilding industry	GL (pending)	
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

Installation dimensions

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

