

Aquam8012A-1U

2G+8T/10T port Layer 2 Gigabit Managed EN50155 Industrial Ethernet Switches

- Supports 10 10/100Base-TX ports or 2 Gigabit copper ports + 8 10/100Base-TX ports
- M12 connector
- Supports DT-Ring, DRP and RSTP ring redundancy protocols
- Complies with EN50155 & EN50121



Overview

The Aquam8012A-1U series managed rack mountable onboard M12 switches, specially designed for rail industries, support up to 2 Gigabit copper ports and 8 10/100Base-TX ports. Aquam8012A-1U supports a wide range of operation temperature from -40°C to +75°C, and meets the EN50155, EN50121 and other rail industry standards. The switches support redundant ring protocols including DRP and RSTP, support VLAN and GVRP, flexible networking and partitioning, multicast, video multicast, and rich network management functions including SNMP. Aquam8012A-1U series can be widely deployed in onboard PIS, CCTV systems, and industrial applications asking for anti-vibration and high EMC performance.

Software functions

Switching Function

Supports VLAN,PVLAN
Supports GVRP
Supports port trunking
Supports LACP
Supports port flow control
Supports speed limit, broadcast storm control

Redundancy Protocol

Supports DT-Ring, DT-Ring+ with the recovery time<50ms
Supports DRP/DHP with the recovery time<20ms
Supports STP/RSTP/MSTP

Multicast Protocol

Supports IGMP-snooping
Supports GMRP (pending)
Supports static multicast

Network Security

Supports IEEE 802.1x
Supports HTTPs/SSL, SFTP Client(pending)
Supports SSH
Supports RADIUS (pending)
Supports TACACA+
Supports user classification

Service Quality Management

Supports ACL
Supports SP,WRR queue scheduling

Management & Maintenance

Supports Console,Telnet,WEB management methods
Supports SNMPv1/v2c/v3,Kyvision centralized management
Supports software upgrade by FTP/TFTP
Supports RMON(pending)
Supports IP/MAC conflict alarm, power failure alarm, port alarm and ring alarm
Supports port mirroring
Supports Syslog
Supports LLDP

IP Address Management

Supports DHCP server/client/option 82

Clock Management

Supports SNTP Client

Product Specifications

Technical Specifications

Standards

- ▼ IEEE 802.3i(10Base-T)
- ▼ IEEE 802.3u(100Base-TX)
- ▼ IEEE 802.3ab(1000Base-T)
- ▼ IEEE 802.3x(Flow control)
- ▼ IEEE 802.1p(Class of Service)
- ▼ IEEE 802.1Q(VLAN)
- ▼ IEEE 802.1w(RSTP)
- ▼ IEEE 802.1X

Switch Properties

Priority Queues	8
Number of VLANs	4k
VLAN ID	1–4093
Number of Multicast Groups	64
MAC Table	8K
Packet Buffer	4Mbit
Packet Forwarding Rate	4.2Mpps
Switching Delay	<10us

Interface Slots

Gigabit Port	
▼ 10/100/1000Base-T(X), M12 connector (X-code)	
Fast Ethernet Port	
▼ 10/100Base-T(X), M12 connector (D-code)	
Console Port	RS232, RJ45 port

LED

- LED on front panel
- ▼ Running LED: Run
- ▼ Ring LED: Ring
- ▼ Power LED: PWR1, PWR2
- ▼ Interface LED: Link/ACT

Power Requirements

Power Input	110VDC(77-110VDC)
Power Terminal	5-pin 5.08 mm-spacing
Power Consumption	< 15W
Overload Protection	Support
Reverse Connection Protection	Support
Redundancy Protection	Support

Physical Characteristics

Housing	Metal
Cooling	Nature cooling, fanless
Protection Class	IP40
Dimensions	483mm×44mm×185mm
Weight	<3kg
Mounting	1U rack mountable

Environmental Limits

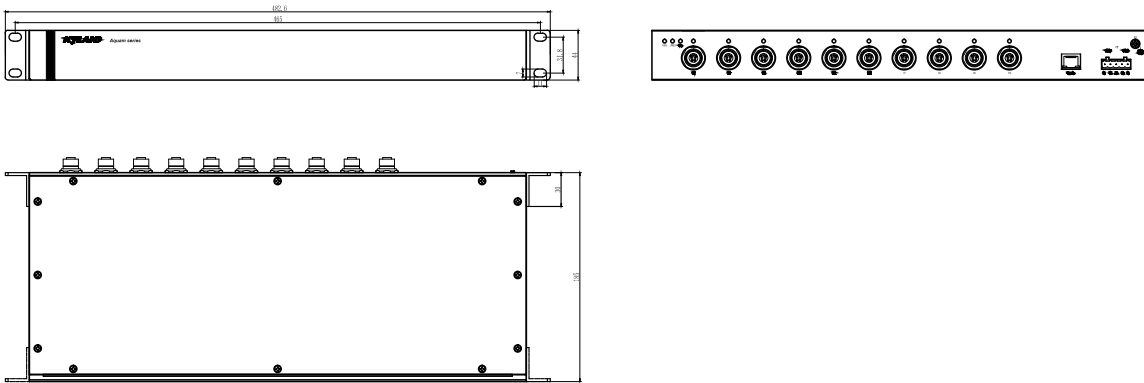
Operating Temperature	-40°C to +75°C
Storage Temperature	-40°C to +85°C
Ambient Relative Humidity	5 ~ 95% (non-condensing)

Quality Assurance

MTBF	2299286 hrs
Warranty	5 years

Industry Standard

- EMI
- ▼ FCC CFR47 Part 15, EN55022/CISPR22, Class A
- EMS
- ▼ IEC61000-4-2 (ESD) ±6kV (contact), ±8kV (air)
- ▼ IEC61000-4-3 (RS) 20V/m (80MHz-2GHz)
- ▼ IEC61000-4-4 (EFT) Power Port: ±2kV; Data Port: ±2kV
- ▼ IEC61000-4-5 (Surge) Power Port: ±1kV/DM, ±2kV/CM
- ▼ IEC61000-4-6 (CS) 10V (150kHz-80MHz)
- ▼ IEC61000-4-8(Power frequency magnetic field)50Hz 100A/m
- ▼ IEC61000-4-9(Pulsed magnetic field)300A/m
- ▼ IEC61000-4-29 (Voltage Short interruptions) 10ms 100%
- Safety
- ▼ EN60950-1
- Machinery
- ▼ IEC61373 (Vibration and Shock)
- ▼ IEC60068-2-32 (Free Fall)



Panel Mounting	Aquam8012A-Ports-PS1-PS2
Port	
10T	10 x 10/100BASE-T(X) M12 port
2GE8T	2 x 10/100/1000BASE-T(X) M12 port; 8 x 10/100BASE-T(X) M12 port;
PS1-PS2	
H2-H2	110VDC(77-154VDC), redundant power supplies



Accessory Model	Description
M12-D-4P-M	100M port connector, M12, D-Coding, 4 Pin male
M12-X-8P-M	Gigabit port connector, M12, X-Coding, 8 Pin male