Product Overview

VCL-MX-XW, is an IEC 61850-3 compliant, sub-station hardened, industrial grade 16 Port Ethernet Switch, that is packaged in a 1U high, 19-inch rack-mountable shelf that can be installed in harsh operational environments. It requires no external fans or forced air cooling.

It offers a wide choice of 1+1 redundant power supply options which include 48V DC, 110-125V DC, 110V AC and 240V AC.

Highlights

- **12 Gigabit Ethernet Ports:** 12 x 10BaseT/ 100BaseT/ 1000BaseT full-duplex Gigabit Ethernet ports.
- **4 Gigabit Ethernet Optical Ports:** 4 x 1000BaseSX / LX Optical.
- It is a fully managed switch that provides full compliance with IEEE 802.1p, IEEE 802.1Q, QoS, Differentiated Services (Diffserv) and packet priority classification protocols for traffic management and optimization.
- The VCL-MX-XW is designed to operate in rugged environments even in extreme -20°C ~ 65°C (-4°F ~ 149°F) temperature conditions without any external fans or forced air cooling.

Key Features

- Sub-Station Hardened Design
- IEC 61850-3 and IEEE 1613 complied
- -20°C~65°C (-4°F ~ 149°F) operating temperature
- 1+1 redundant power supply

Power Supply Options

- Dual Redundant (AC + DC).
- 1+1 redundant AC power supply, 88~265V AC (50/60 Hz) Input
- 1+1 redundant DC power supply, 12~60V DC Input (-48V DC)
- 1+1 redundant DC power supply, 80~150V DC Input
- 1+1 redundant DC power supply, 125~373V DC Input
- EMI/EMC compliant.

Management Features

- Web-based management
- Any Ethernet port can be used as management
- Power LEDs.
- Supports IEEE802.1x security.
- Password Protected Access Control
- Access Logs
- Encrypted Password Protection.

Ethernet Port Description

- 16 Ports Sub-Station Hardened Switch
- All Copper Gigabit Ethernet Ports support auto-negotiation, auto-MDI/MDIX.
- All Optical Gigabit Ethernet Ports are full-duplex SFP based Gigabit Ethernet ports.
- Ethernet packet forwarding at wire-speed, non-blocking.
- User programmable bandwidth rate control on a per port basis (Ingress / Egress Rate Limiting).
- Flow Control.
- Reliable Store-and-Forward operation with data integrity checking.
- Supports up to 1632 Byte Frames.
- Supports VLAN and IEEE802.1Q VLAN tagging for Management Port.
- IEEE802.1p, 802.1Q and Differential Services (DS) QoS
- Support IGMP Snooping and mirroring
- Support LLDP (Link Layer Discovery Protocol) table and statistics

Environmental

Operating Temperature	-4°F ~ 149°F (-20°C ~ 55°C)
Storage Temperature	-40°F ~ 185°F (-40°C ~ 85°C)
Operating Humidity	10%~95% relative humidity, non-condensing
Storage Humidity	10%~95% @40°C; non-condensing

CE Compliance

- Low Voltage Directive 2014/35/EU
- Electromagnetic Compatibility 2014/30/EU

Other Regulatory Compliances

- RoHS,
- CE Marking
- Complies with FCC Part 68 and EMC FCC Part 15

EMI, EMC, Surge Withstand and other Compliances

EN 50081-2	EN 50082-2	IEC 60068-2-29
IEC 61000-4-6 (Conducted Immunity)		IEC 60068-2-6
IEC 60068-2-2	IEC 60068-2-78	IEC 60068-2-1
CISPR 32 / EN55032 Class A (Conducted Emission and Radiated Emission)		
IS 9000 (Part II Sec. 1-4, Part III Sec. 1-5, Part IV, Part 14 Sec.1-3)		
IEC 60068-2-14	IEC 60870-2-1	IEC 61000-4-5
IEC 61000-4-3	IEC 61000-4-8 (Radiated Immunity)	
IEC 61000-4-2	IEC 61000-4-11	IEC 61000-4-4

Physical Dimension

- 19 Inch, 1U High Rack Mount
- H x W x D: 44mm x 480mm x 300mm
- Net Weight: 2.3 Kgs
- Gross Weight: 5.0 Kgs

Ordering Information

Part #	Description
VCL-MX-XW-5014-xxxx*	VCL-MX-XW, Industrial Grade Ethernet Switch (IEC 61850-3 compliant) 19-inch 1U High Rack Mount version **16 Ports Sub-Station Hardened Switch:** – **12 Gigabit Ethernet Ports:** 12 x 10BaseT/ 100BaseT/ 1000BaseT full-duplex Gigabit Ethernet ports. – **4 Gigabit Ethernet Optical Ports**: 4 x 1000BaseSX / LX Optical. – Add *Power supply options (*xxxx power supply option)

* Power Supply Options

Part #	Description
AC088~265R	2 x 88~265V AC Power Supply Input [1+1 Redundant Power Supply]
DC012~060R	2 x 12~60V DC Power Supply Input [1+1 Redundant Power Supply]
DC080~150R	2 x 80~150V DC Power Supply Input [1+1 Redundant Power Supply]
DC125~373R	2 x 125~373V DC Power Supply Input [1+1 Redundant Power Supply]

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