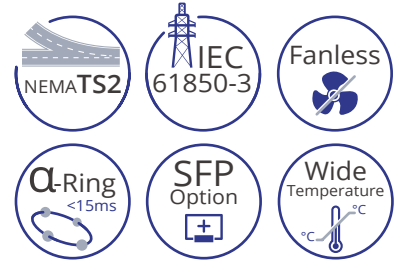


EX73900 Series

IEC 61850-3/IEEE 1613 Lite L3 Hardened Managed 16-port Gigabit Ethernet Switch



Product Highlights

High Bandwidth and Versatility

- 8 or 12 10/100/1000BASE-T(X) ports for high bandwidth connections
- Up to 4 gigabit fiber connections
- Full capacity switching running at full duplex

Hardened-Grade for Non-Ventilated & Harsh Environments

- Wide operating temperature range -40 to 75°C (-40 to 167°F)
- Fanless operation
- High impact, thermal shock, and electrical noise resistance

Lite Layer 3 Functionality

- Static routing, RIP v1/v2, and OSPF support
- Redundancy with VRRP
- Reduces amount of broadcast traffic

Compliance

- IEC 61850-3/IEEE 1613 certified for power substations
- NEMA TS2 rated
- UL certified for safety

Management/Security Features

- Port control
- RADIUS remote authentication
- Configure and monitor with eVue™ and eLite™

Support

- Complimentary Technical Support
- Free Firmware Upgrades
- Limited Lifetime Warranty

Overview

EtherWAN's EX73900 Series is a hardened DIN-rail mounted managed Ethernet switch platform. Equipped with up to 12 gigabit Ethernet and 4 gigabit fiber ports, the EX73900 Series provides flexibility, speed, and reliability to support networks for urban infrastructure, transportation, security, power substations, and other areas where connectivity is crucial.

Ordering Information

Models

EX73931-0VB	12-Port 10/100/1000BASE-TX + 4-port Gigabit SFP
EX73921-0VB	8-Port 10/100/1000BASE-TX + 4-Port Gigabit SFP
EX73921-0XB	8-Port 10/100/1000BASE-TX + 4-Port Gigabit Fiber

* DIN-Rail mounting kit included.

Ordering Information

Gigabit Fiber Options (X)

3	1000BASE-SX (SC) - 550m
4	1000BASE-SX (SC) - 2Km
5	1000BASE-SX (ST) - 550m
A	1000BASE-LX (SC) - 10Km
B	1000BASE-LX (SC) - 20Km
R	1000BASE-BX (SC) WDM-TX: 1310nm/RX: 1550nm-20Km
S	1000BASE-BX (SC) WDM-TX: 1550nm/RX: 1310nm-20Km

* More Gigabit options are also available upon request.

Software Features

Interface	+
CLI, Telnet, Web Browser	
SNMP v1/v2c/v3	
Management	+
Firmware upgrade	
Configuration backup via TFTP	
DHCP Server/Client	
RMON (Remote Monitoring): group 1, 2, 3, 9	
Port Mirroring: TX/RX and both	
NTP (Network Time Protocol) synchronization	
IEEE 802.1ab LLDP (Link Layer Discovery Protocol)	
IPv4/IPv6	
Security	+
MAC Address Filtering	
Enable/Disable port	
Storm Control (Broadcast and multicast types)	
IEEE 802.1x LAN Access Control	
Remote authentication through RADIUS and TACACS+	
SSH for CLI and Telnet security	
SSL for Web security	
System log (Remote/Local)	
ACL (Access Control List, up to 4096 entries)	

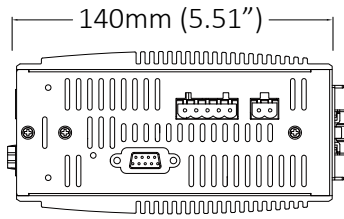
Quality of Service (QoS)	+
Priority Queues: 4 queues per port	
Traffic classification based on IEEE 802.1p CoS, DSCP, WRR and strict mode	
Rate Limiting (Ingress/Egress)	
Layer 2 Features	+
Auto-negotiation for port speed and duplex mode	Flow Control IEEE 802.3x Full duplex mode Back-Pressure half duplex mode
Redundant Protocols	IEEE 802.1D STP IEEE 802.1w RSTP IEEE 802.1s MSTP
VLANs	IEEE 802.1Q Tag VLANs (128 groups, 4096 VID) GVRP GMRP
Link Aggregation	Static Trunk (4 groups, support MAC base) IEEE 802.3ad LACP
IGMP Snooping v1/v2/v3	
Layer 3 Features	+
IP Packet Routing	Maximum number of routes in hardware: 64 entries Static Routing RIP v1/v2 OSPF v2
Routing Redundancy	VRRP

Hardware Specifications

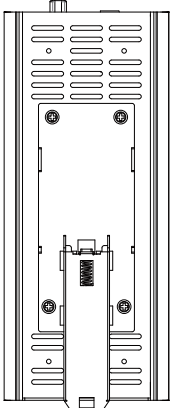
Interface		+
Ethernet	8 or 12 x 10/100/1000BASE-T(X) 4 x 1000BASE SX/LX/SFP	
Console	1 x DB9 RS-232	
Alarm Contact	1 x Relay output, current capacity 0.6A/30VDC	
LED Indicators	Per Unit: Power 1, Power 2 Per Port: Link/Activity (Green)	
Technology		+
Standards	IEEE 802.3 10BASE-T IEEE 802.3u 100BASE-TX/100BASE-FX IEEE 802.3ab 1000BASE-T IEEE 802.3z 1000BASE-SX/1000BASE-LX IEEE 802.3x Full duplex and flow control IEEE 802.1p QoS IEEE 802.1Q Tag VLANs IEEE 802.1w RSTP IEEE 802.1x PNAC	
Forward/Filtering Rate	14,880pps for 10Mbps 148,810pps for 100Mbps 1,488,100pps for 1000Mbps	
Packet Buffer Memory	12M bits	
Processing Type	Store-and-Forward Auto-negotiation Half-duplex back-pressure and IEEE 802.3x Full-duplex flow control Auto MDI/MDIX	
Address Table Size	16K MAC Addresses	
Power		+
Input	12-48VDC Redundant (Terminal block)	
Power Consumption	17.28W Max. 1.44A@12VDC, 0.72A@24VDC	
Protection	Reverse Polarity Protection	
Physical		+
Casing Material	Aluminum	
IP Rating	IP30	
Dimensions	72 x 140 x 170mm (W x D x H) 2.8" x 5.5" x 6.7"	
Weight	1.4kg (3.09lbs)	
Installation Type	DIN-rail mounting	

Environmental		+
Operating Temp.	-40 to 75°C (-40 to 167°F) Tested @ -40 to 85°C (-40 to 185°F)	
Storage Temp.	-45 to 85°C (-49 to 185°F)	
Relative Humidity	5% to 95% (non-condensing)	
Regulatory		+
ISO	Manufactured in ISO-9001 facility	
EMI	FCC Part 15B Class A VCCI Class A EN 61000-6-4 EN 61000-3-2 EN 61000-3-3	
EMS	EN 61000-6-2 EN 61000-4-2 (ESD) EN 61000-4-3 (Radiated RFI) EN 61000-4-4 (Burst) EN 61000-4-5 (Surge) EN 61000-4-6 (Induced RFI) EN 61000-4-8 (Magnetic Field)	
Safety	UL 61010	
Vibration	IEC 60068-2-6 Fc	
Shock	IEC 60068-2-27 Ea	
Free Fall	FED STD 101C Method 5007.1	
Industrial Compliance	IEC 61850-3/IEEE 1613 NEMA TS2	
Warranty		+
Length	Limited Lifetime	
Details	www.etherwan.com/support/warranty-policy	
What's Included		+
Device	Ethernet Switch	
Cables	1 Console Cable	
Documentation	Quick Install Guide	

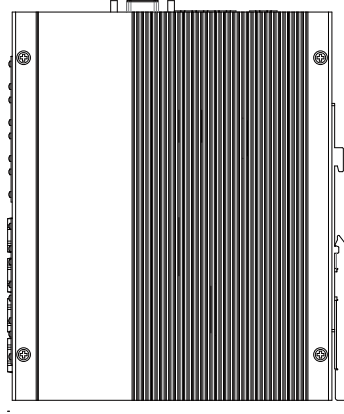
Dimensions



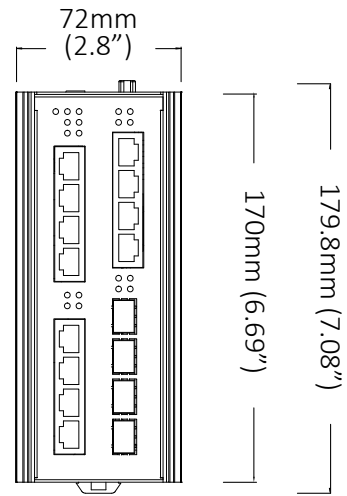
Top



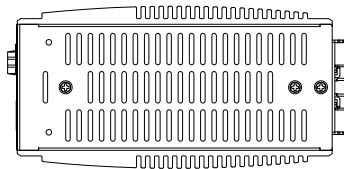
Back



Side



Front



Bottom

Software

Network Management eVue™ Network Configuration and Monitoring Tool

Network Discovery eLite™ Network Discovery and IP Configuration Tool

EtherWAN Home Devices Batch Group Events Settings Screen Zoom Logout

Device List

IP	System Name	Group
192.168.50.12	EG99-5012	
192.168.50.62	EX709-5062	
192.168.50.254	R50	
192.168.50.11	EG99-5011	
192.168.50.63	EX74-5063	
192.168.50.14	EX779-5014	
192.168.50.61	EX71v2-5061	
192.168.50.44	EX71-5044	
192.168.50.64	EX73-5064	
192.168.50.34	EX739-5034	

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Topology

Latest Events 0 0 0

Acknowledged	ID	Severity	Time	Service	Node	Message
✓	5107	Normal	6/28/2019, 9:50:35 AM	login	server	User 'admin' logged in.
✓	5106	Normal	6/27/2019, 10:00:50 AM	login	server	User 'admin' logged in.
✓	5105	Major	6/24/2019, 1:18:23 PM	ping-monitor	192.168.1.19	Web 192.168.1.19 is down.
✓	5105	Major	6/24/2019, 1:18:23 PM	ping-monitor	192.168.1.19	Telnet 192.168.1.19 is down.
✓	5104	Normal	6/24/2019, 1:12:34 PM	login	server	User 'admin' logged in.

eLite List Server Firmware Configuration Help

Search, Refresh, Add, Edit, Delete, Print, Help icons

IP Address	MAC Address
192.168.50.22	00:e0:b3:50:22:00
192.168.50.31	00:e0:b3:50:31:00
192.168.50.72	00:e0:b3:50:72:00
192.168.50.55	00:e0:b3:50:55:00
192.168.50.23	00:e0:b3:50:23:00
192.168.50.73	00:e0:b3:50:73:00
192.168.50.44	00:e0:b3:50:44:00
192.168.50.64	00:e0:b3:50:64:00
192.168.50.43	00:e0:b3:50:43:00
192.168.50.62	00:e0:b3:50:62:00
192.168.50.71	00:e0:b3:50:71:00
192.168.50.24	00:e0:b3:50:24:00

Accessories

Hardened Gigabit SFP Modules	+
www.etherwan.com/products/sfp-fiber-transceiver	
DIN-Rail Power Supplies	+
www.etherwan.com/products/din-rail-power-supply (*)	
*Recommended Power Supply	+
HDR-30-24 30W 24VDC DIN-Rail Power Supply	
EB-232	+
Configuration Backup and Restoration Tool	