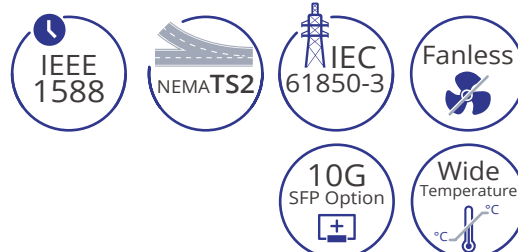


# EX73900X Series

Hardened Managed 12-Port Gigabit and 4-Port 10G SFP+ Ethernet Switch



## Product Highlights

### High Bandwidth and Versatility

- 8 or 12 10/100/1000BASE-T(X) ports for high bandwidth connections
- Up to 4 dual-rate 1/10G SFP+ uplink ports for 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, SFTP
- Dying gasp feature provides SNMP trap upon power off
- Configure and monitor with eVue™ and eLite™

### Support

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

## Overview

EtherWAN's EX73900X series is a hardened DIN-rail mounted managed Ethernet switch platform. Equipped with up to 12 gigabit Ethernet and 4 dual-rate 10 gigabit SFP+ ports, and the IEEE1588v2 Precision Time Protocol (PTP) that uses network packets and time stamps for network time synchronization. The EX73900X 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

EX73934X-0VB	12-port 10/100/1000BASE-T(X) + 4-port 1/10G SFP+
EX73924X-0VB	8-port 10/100/1000BASE-T(X) + 4-port 1/10G SFP+
EX73922X-0VB	8-port 10/100/1000BASE-T(X) + 2-port 1/10G SFP+

# Software Features

<b>Interface</b>	+
CLI, Telnet, Web GUI, SSH	
<b>Management</b>	+
Firmware upgrade	
SFTP (Secured FTP) support	
Configuration backup	
DHCP Server/Client	
RMON (Remote Monitoring)	
Port Mirroring	
NTP (Network Time Protocol) synchronization	
LLDP (Link Layer Discovery Protocol)	
IPv4/IPv6	
SNMP v1/v2c/v3	
Modbus TCP	
<b>Security</b>	+
MAC Address filtering	
Enable/Disable port	
Storm Control	
System Logging	
IEEE 802.1x LAN Access Control	
Remote authentication through RADIUS and TACACS+	
Complex password support	
Multi-user login and privileged access management	
SSH for CLI and Telnet security	
TLS and HTTPS for Web security	
ACL (Access Control List, up to 4096 entries)	
Storm Detection Support	
<b>Quality of Service (QoS)</b>	+
Priority Queues: 8 queues per port	
Traffic classification based on IEEE 802.1p CoS (Cost of Service), DSCP (Differentiated Services Code Point), WRR (Weighted Round Robin), and strict mode	

## Rate Limiting (Ingress/Egress)

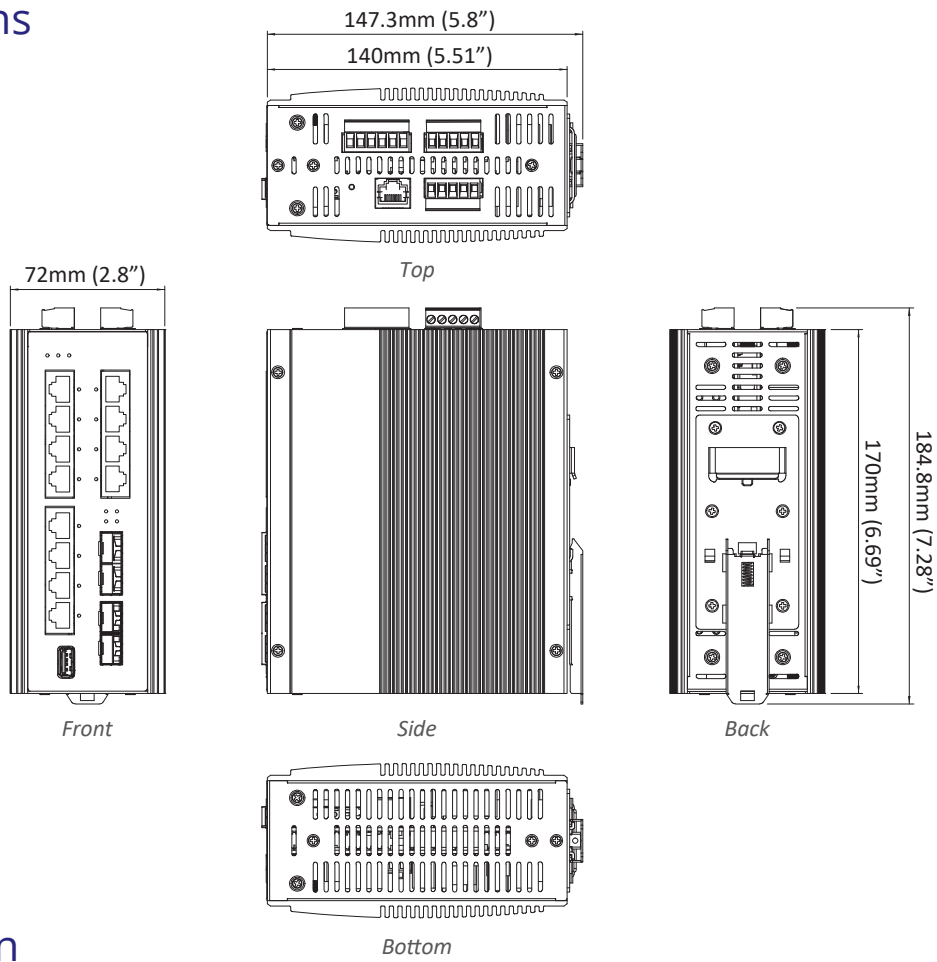
<b>Layer 2 Features</b>	+
<b>Auto-negotiation for port speed and duplex</b>	Flow Control IEEE 802.3x full duplex mode Back-pressure half duplex mode
<b>Redundant Protocols</b>	IEEE 802.1D STP IEEE 802.1w RSTP IEEE 802.1s MSTP EtherWAN's Alpha-Ring network fault recovery
<b>VLANs</b>	IEEE 802.1Q Tag VLANs GVRP GMRP
<b>Link Aggregation</b>	Static Trunk (4 groups) IEEE 802.3ad LACP
IGMP Snooping v1/v2/v3	
<b>Layer 3 Features</b>	+
<b>IP Packet Routing</b>	Maximum number of routes in hardware: 64 entries Static Routing RIP v1/v2 OSPF v2
<b>Routing Redundancy</b>	VRRP
<b>Software Properties and Performance</b>	+
<b>Switching Fabric</b>	104Gbps
<b>Forwarding Rate</b>	75.29Mpps
<b>Total VLAN Entries</b>	256 (4096 VID)
<b>Jumbo Frame Size</b>	9KB
<b>MAC Table Size</b>	16K

# Hardware Specifications

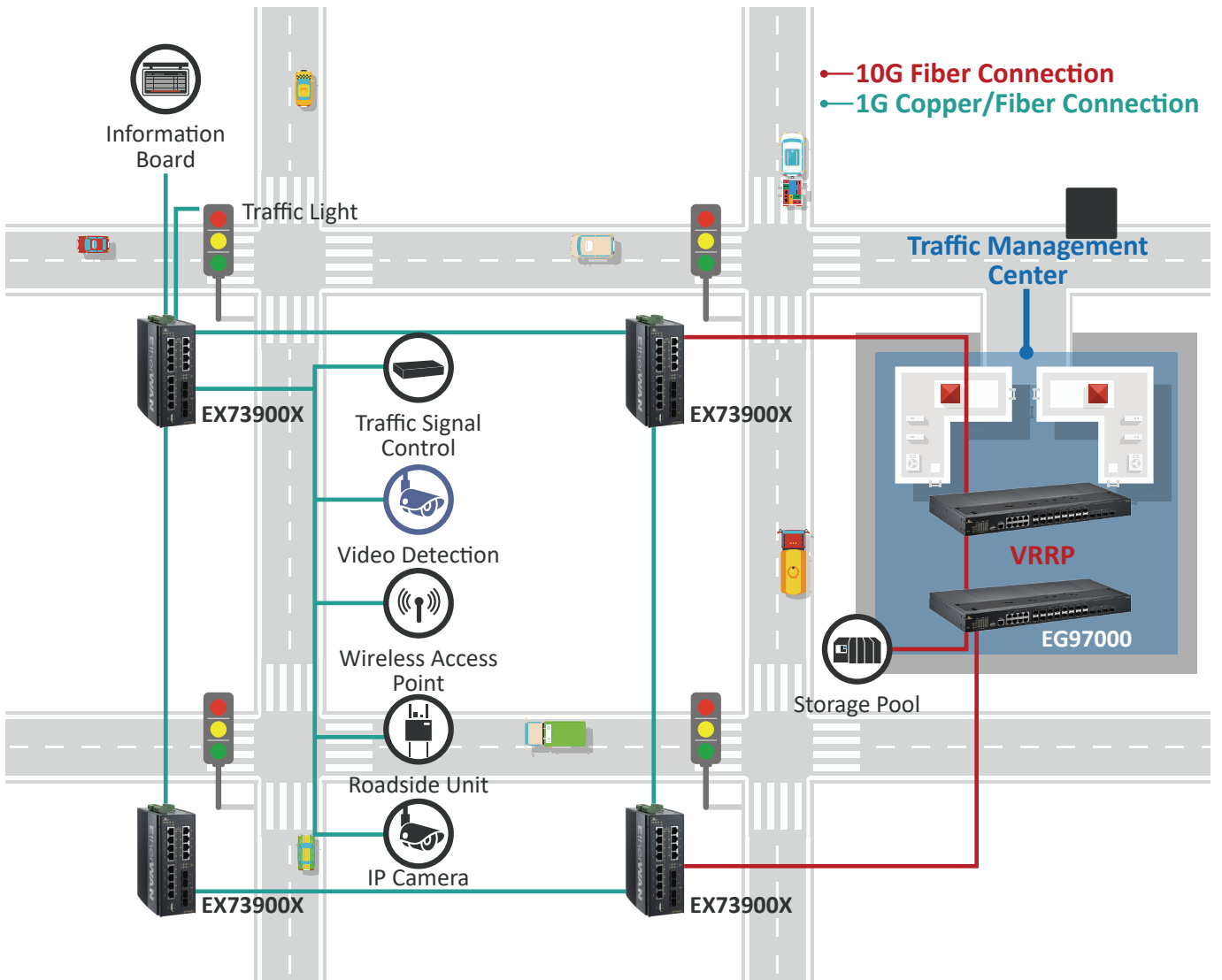
Interface		+
Ethernet	8 or 12 x 10/100/1000BASE-T(X) 2 or 4 x 1/10G SFP+	
Console	1 x RJ45	
Config Backup	1 x USB (Type A Connector)	
Digital Input	2 x Digital Input Wet Contact: 0-3V for State 0 13-30V for State 1 Max input current: 8mA Dry Contact: Logic Level 1-Close to GND Logic Level 0-Open	
Alarm Contact	2 x Relay output, current capacity 0.6A/30VDC	
LED Indicators	Per Unit: Power 1, Power 2, Alarm Per Port: Link/Activity	
Technology		+
Standards	IEEE 802.3 10BASE-T IEEE 802.3u 100BASE-TX/100BASE-FX IEEE 802.3ab 1000BASE-T IEEE 802.3ad link aggregation control IEEE 802.3z 1000BASE-SX/1000BASE-LX IEEE 802.3x full duplex and flow control IEEE 802.1D STP IEEE 802.1p QoS IEEE 802.1Q Tag VLANs IEEE 802.1s MSTP IEEE 802.1w RSTP IEEE 802.1x PNAC IEEE 802.1ab LLDP IEEE 802.3az EEE IEEE 1588v2 PTP	
Forward/Filtering Rate	14,880pps for 10Mbps 148,810pps for 100Mbps 1,488,100pps for 1000Mbps 14,881,000pps for 10Gbps	
Processing Type	Store-and-forward Auto-negotiation Half-duplex back-pressure and full-duplex flow control Auto MDI/MDIX	
System Memory	2Gb DDR3 SDRAM	
Flash Storage	1Gb	
Power		+
Input	12-48VDC Redundant (Terminal block)	
Power Consumption	20W Max	
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 (3.08lbs)	
Installation Type	DIN-rail mounting	
Environmental		+
Operating Temp.	-40 to 75°C (-40 to 167°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	
Traffic	NEMA TS2	
Rail	EN 50121-4	
Power Substation	IEC 61850-3/IEEE 1613	
Vibration	IEC 60068-2-6	
Shock	IEC 60068-2-27	
Free Fall	FED STD 101C Method 5007.1	
Warranty		+
Length	Limited Lifetime	
Details	<a href="http://www.etherwan.com/support/warranty-policy">www.etherwan.com/support/warranty-policy</a>	
What's Included		+
Device	Ethernet Switch	
Cables	1 Console Cable	
Installation	Mounting brackets, screws	
Documentation	Quick Install Guide	

# Dimensions



# Application



# 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**

Online Offline Event

**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 Remove Import Export

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

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Hardened Gigabit & 10 Gigabit SFP Modules	+
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[www.etherwan.com/products/sfp-fiber-transceiver](http://www.etherwan.com/products/sfp-fiber-transceiver)

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DIN-Rail Power Supplies	+
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[www.etherwan.com/products/din-rail-power-supply\(\\*\)](http://www.etherwan.com/products/din-rail-power-supply(*))

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*Recommended Power Supply	+
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[EX41-145046 Power Supply 45W 12VDC with Open Wire](#)

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