

EX73900X Series

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



Highlight

+ 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 substation
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.

EtherWAN — "When Connectivity is Crucial."

Features

+ Interface

CLI, Telnet, Web GUI, SSH

+ Management

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

+ Security

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

+ Quality of Service (QoS)

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)

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

+ Layer 2 Features

Auto-negotiation for port speed and duplex
 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
 EtherWAN's Alpha-Ring network fault recovery

VLANs

IEEE 802.1Q Tag VLANs
 GVRP
 GMRP

Link Aggregation

Static Trunk (4 groups)
 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

+ Software Properties and Performance

Switching Fabric

104Gbps

Forwarding Rate

75.29Mpps

Max VLANs

256 (4096 VID)

Jumbo Frame Size

9KB

MAC Table Size

16K

Packet Buffer Memory

12M bits

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
www.etherwan.com/support/warranty-policy

+ What's Included

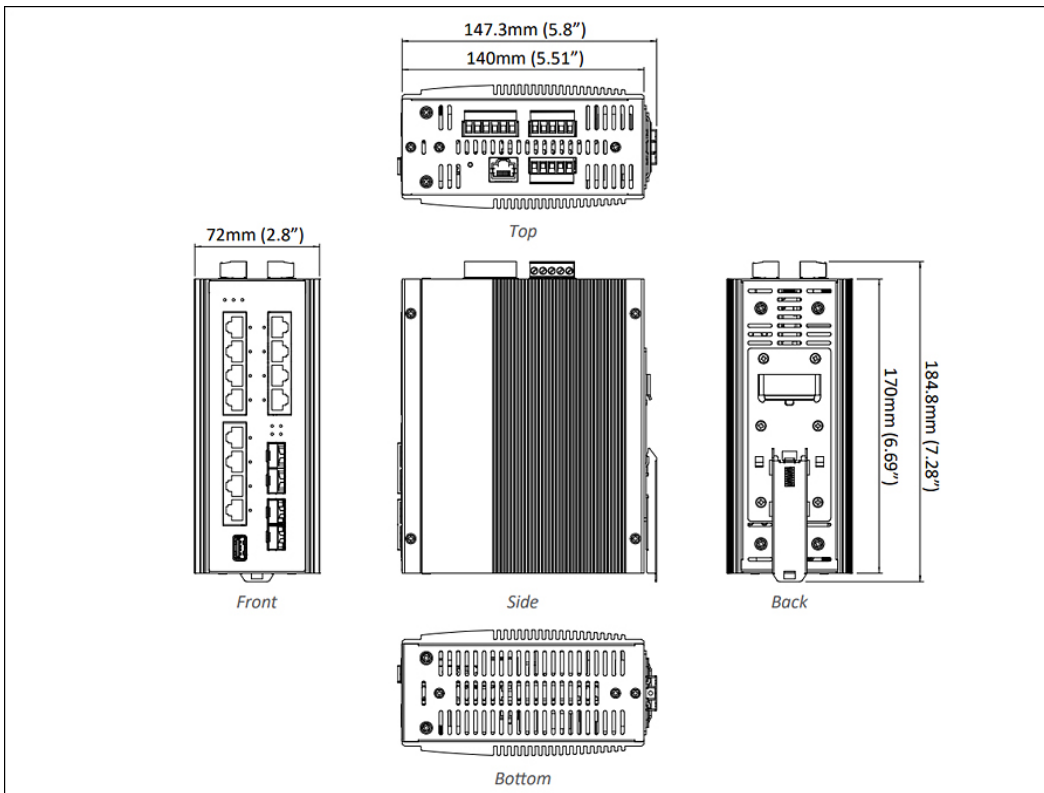
Device
Ethernet switch

Cables
1 Console cable

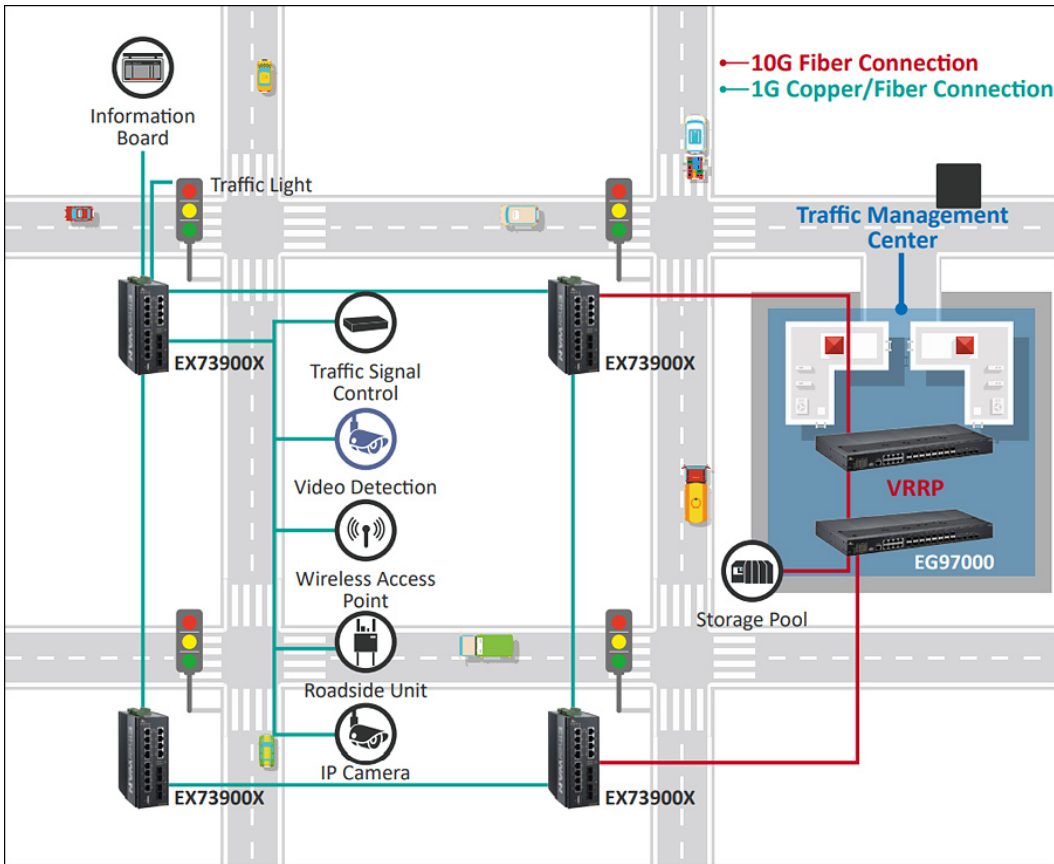
Installation
Mounting brackets, screws

Documentation
Quick install guide

Dimensions

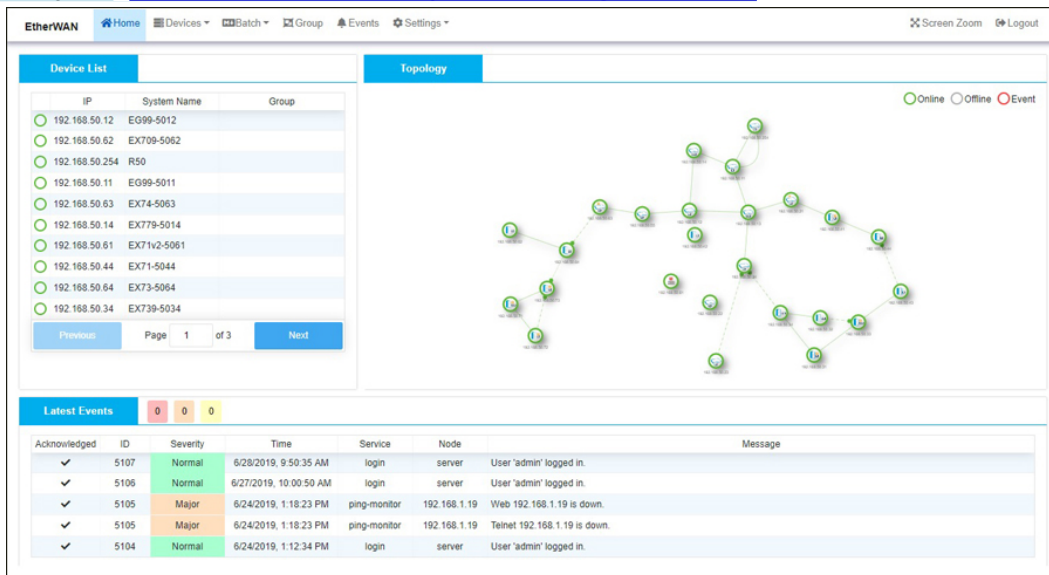


Application



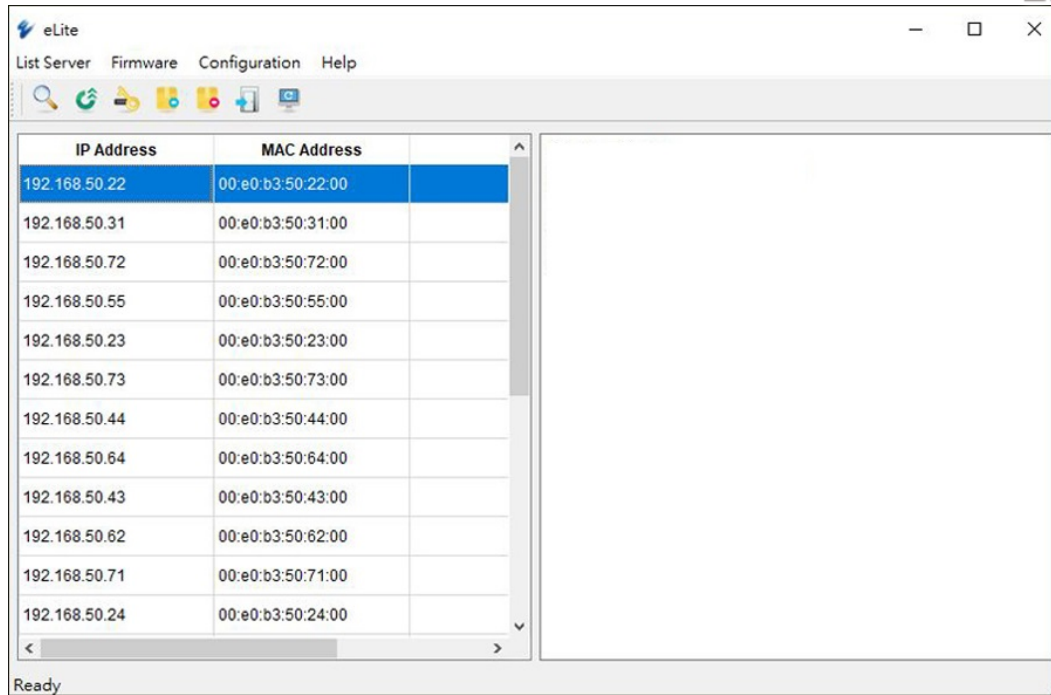
Software

Network Management [eVue™ Network Configuration and Monitoring Tool](#)
 Network Discovery [eLite™ Network Discovery and IP Configuration Tool](#)



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	

Acknowledged	ID	Severity	Time	Service	Node	Message
✓	5107	Normal	6/29/2019, 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.



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

Ordering Info

+ Model

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+

+ Accessories

Hardened Gigabit & 10 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**

EX41-145046 Power Supply 45W 12VDC with Open Wire

