

EX73900E Series

Hardened Managed 10 to 16-Port Gigabit Ethernet Switch



Overview

EtherWAN's EX73900E series is a hardened DIN-rail mounted managed Ethernet switch platform. Equipped with up to 12 gigabit Ethernet and 4 dual-rate gigabit SFP ports, and the IEEE1588v2 Precision Time Protocol (PTP) that uses network packets and time stamps for network time synchronization. The EX73900E 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."

Highlights

+ High Bandwidth and Versatility

8 or 12 10/100/1000BASE-T(X) ports for High bandwidth connections
Up to 4 Dual-rate 100/1000BASE 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
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

Features

+ Interface

CLI, Telnet, Web GUI

+ Management

Firmware upgrade
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

SSL and HTTPS for web security

ACL (Access Control List, up to 4096 entries)

+ 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)

+ 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

32Gbps

Forwarding Rate

23.5Mpps

Total VLAN Entries

256 (4096 VID)

Jumbo Frame Size

9KB

MAC Table Size

16K

Packet Buffer Memory

12M bits

Specifications

+ Interface

Ethernet

8 or 12 x 10/100/1000BASE-T(X)

2 or 4 x 100/1000BASE 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 1588v2 PTP

Forward/Filtering Rate

14,880pps for 10Mbps

148,810pps for 100Mbps

1,488,100pps for 1000Mbps

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

Overload Current Protection

+ Physical

Casing Material

Aluminum

IP Rating

IP40

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

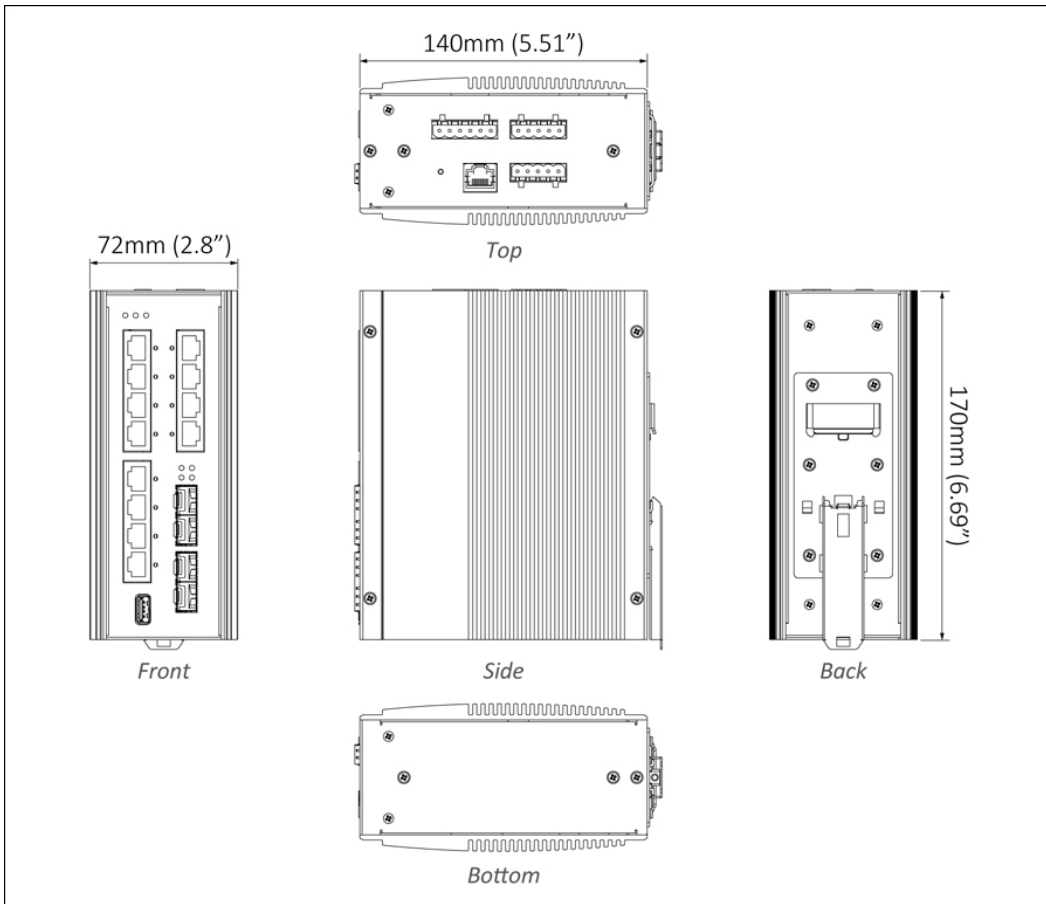
Installation

Mounting brackets, screws

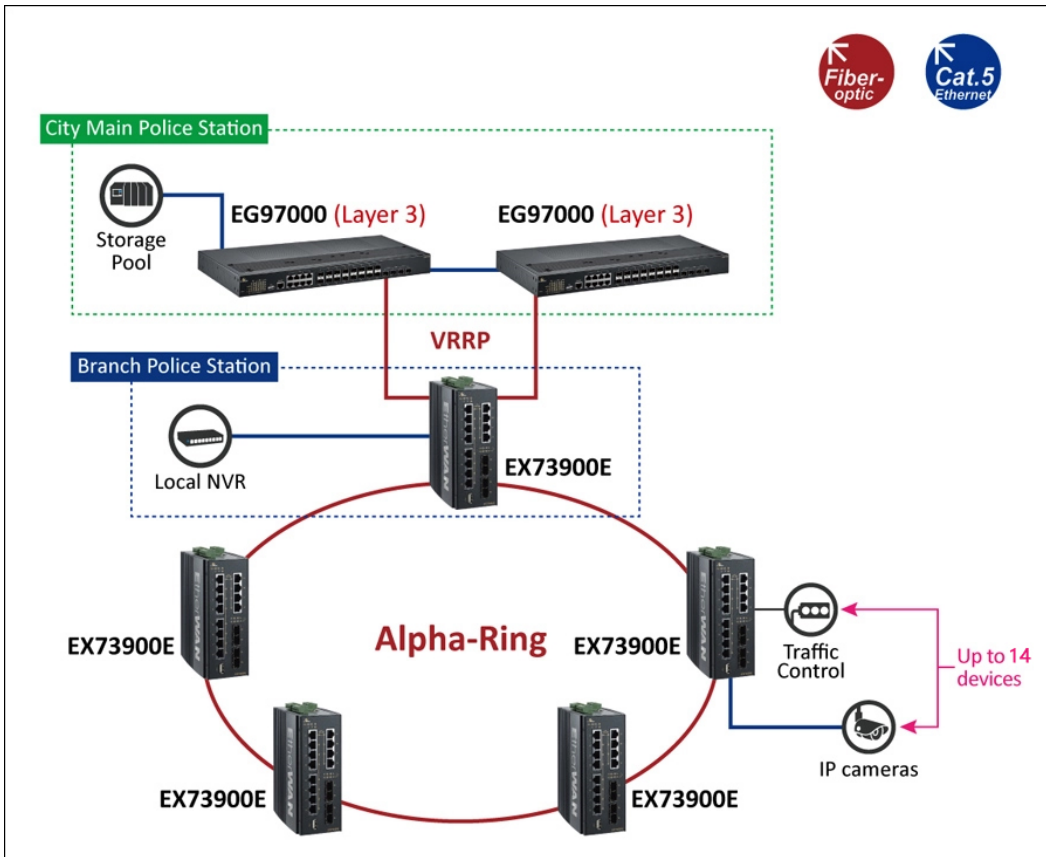
Documentation

Quick install guide

Dimensions



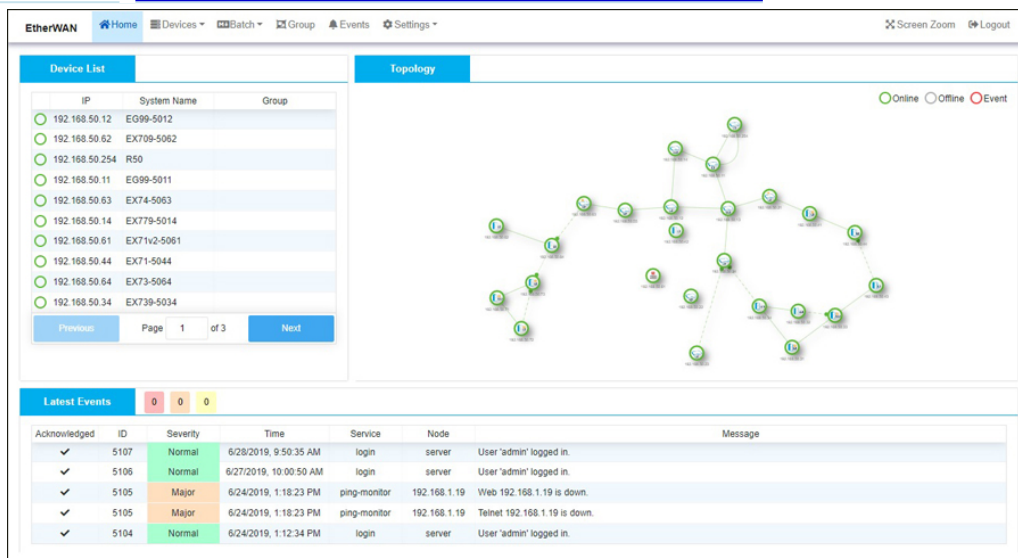
Application



Software

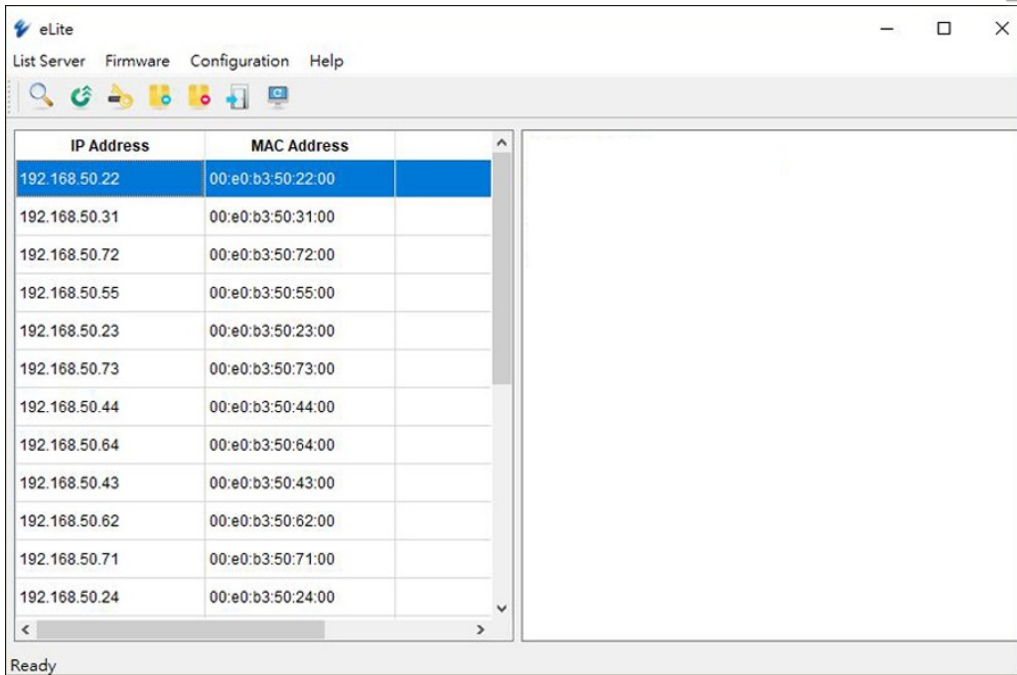
Network Management [eVue™ Network Configuration and Monitoring Tool](#)

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



The screenshot shows the EtherWAN software interface. The top navigation bar includes 'Home', 'Devices', 'Batch', 'Group', 'Events', and 'Settings'. The main content area is divided into three sections:

- Device List:** A table listing devices with columns for IP, System Name, and Group. The table shows 10 devices, including EG99-5012, EX709-5062, R50, EG99-5011, EX74-5063, EX779-5014, EX71v2-5061, EX71-5044, EX73-5064, and EX739-5034.
- Topology:** A network diagram showing a complex mesh of devices connected in a ring-like structure. A legend indicates Online (green circle), Offline (grey circle), and Event (red circle).
- Latest Events:** A table showing recent events with columns for Acknowledged, ID, Severity, Time, Service, Node, and Message. The events include login attempts and ping-monitor alerts.



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

- EX73934E-0VB 12-port 10/100/1000BASE-T(X) + 4-port 100/1000BASE SFP
- EX73924E-0VB 8-port 10/100/1000BASE-T(X) + 4-port 100/1000BASE SFP
- EX73922E-0VB 8-port 10/100/1000BASE-T(X) + 2-port 100/1000BASE SFP

+ Accessories

- Hardened 100BASE SFP Modules www.etherwan.com/products/sfp-fiber-transceiver
- 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 EX41-145046 Power Supply 45W 12VDC with Open Wire

