

# EX73000 Series

Hardened Managed 16-port 10/100BASE with 2-port Gigabit combo Ethernet Switch



## Highlights

### + 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

### + Compliance

EN 50121-4 certified for railway applications  
NEMA TS2 rated  
UL certified for safety

### + Management/Security Features

Port control  
802.1x port-based network access control and remote authentication through RADIUS and TACACS+  
Configure and monitor with eVue™ and eLite™

### + Support

Complimentary Technical Support  
Free Firmware Upgrades  
Limited Lifetime Warranty

## Overview

EtherWAN's EX73000 Series is a hardened DIN-rail mounted managed Ethernet switch platform. Equipped with 16 10/100BASE-TX and 2 gigabit fiber ports along with Class 1 Div 2 certification, the EX73000 Series provides flexibility, speed, and reliability to support networks for hazardous locations and other areas where connectivity is crucial.

EtherWAN — "When Connectivity is Crucial."

## 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
- SSH for CLI and Telnet security
- SSL for web security
- System log (Remote/Local)
- Multi-level user account/password against unauthorized configuration

### + 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
- 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 (<15ms)

#### VLANs

- Port-based VLANs
- IEEE 802.1Q Tag VLANs (128 groups, 4096 VID)
- GVRP
- GMRP

#### Link Aggregation

- Static Trunk (2 groups, support MAC base)
- IEEE 802.3ad LACP

#### IGMP Snooping v1/v2/v3

### + Performance

- Switching Capability
- 7.2Gbps

## Specifications

### + Interface

#### Ethernet

16 x 10/100BASE-T(X)

0, 1 or 2 x Gigabit

#### 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: Copper, Orange: Fiber)

### + 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

8.06W 0.336A@24VDC

Protection  
Reverse Polarity Protection

## + Physical

Casing Material  
Aluminum

IP Rating  
IP30

Dimensions  
60 x 125 x 145mm (W x D x H)  
2.56" x 4.92" x 5.71"

Weight  
1.19kg

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)

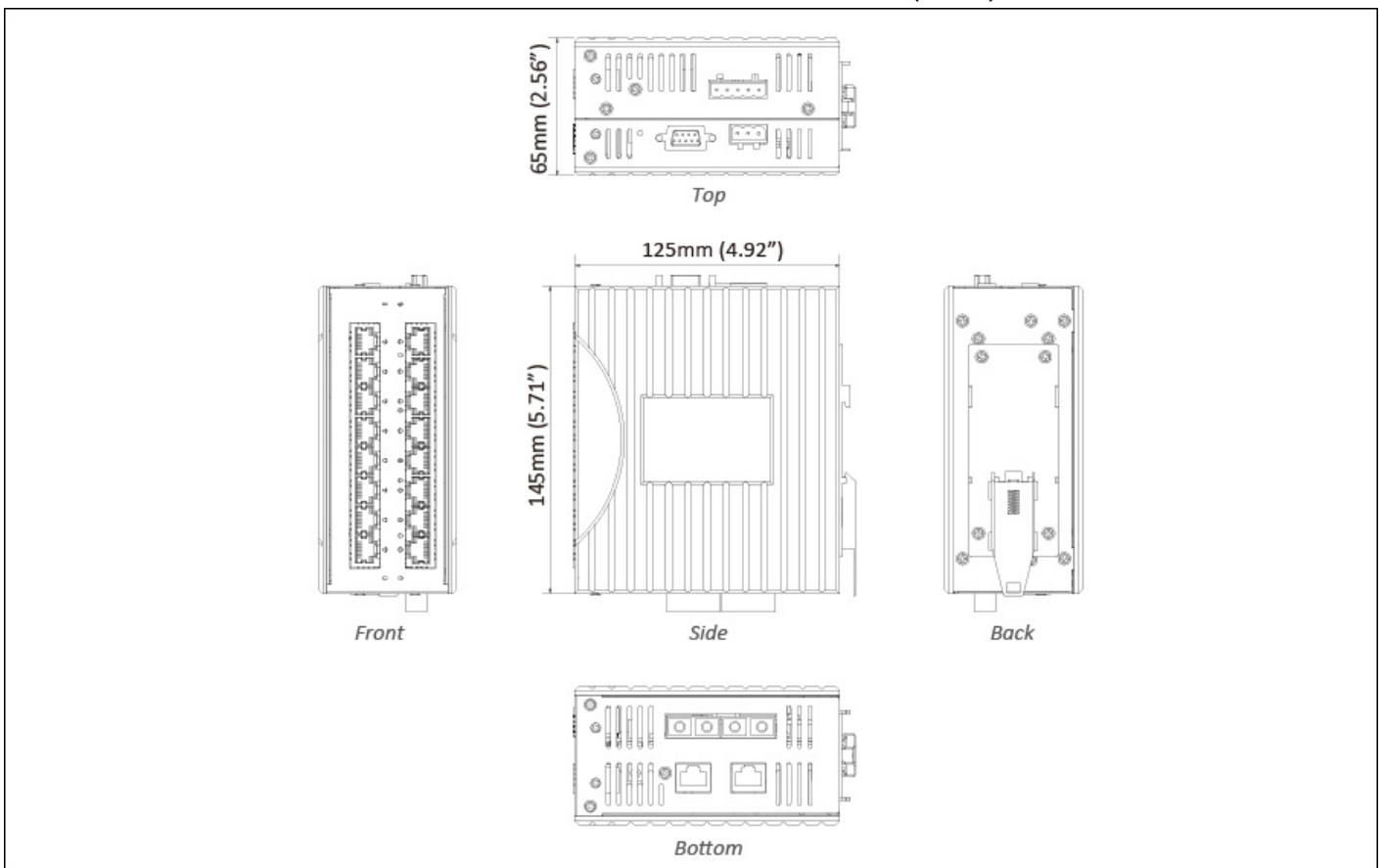
## + Regulatory

**ISO**  
Manufactured in ISO-9001 facility

**EMI**  
FCC Part 15B Class A  
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)

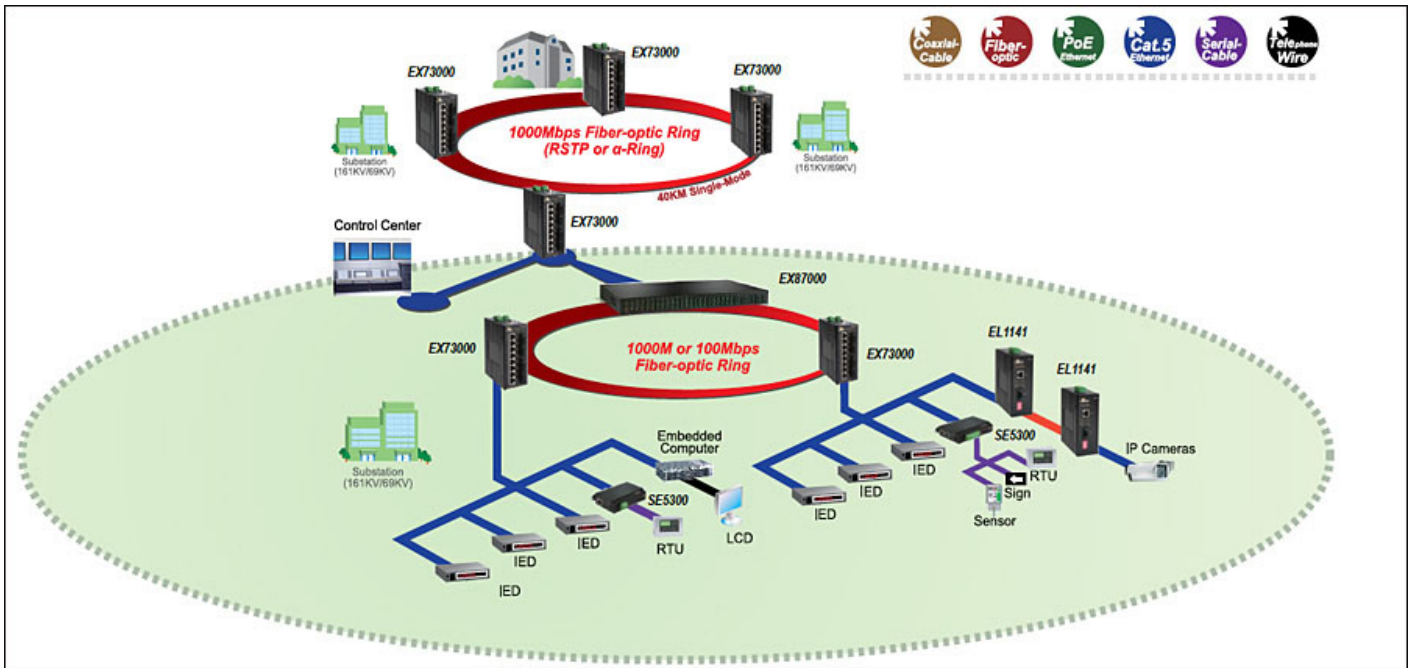
## Dimensions



**Device**  
Ethernet Switch

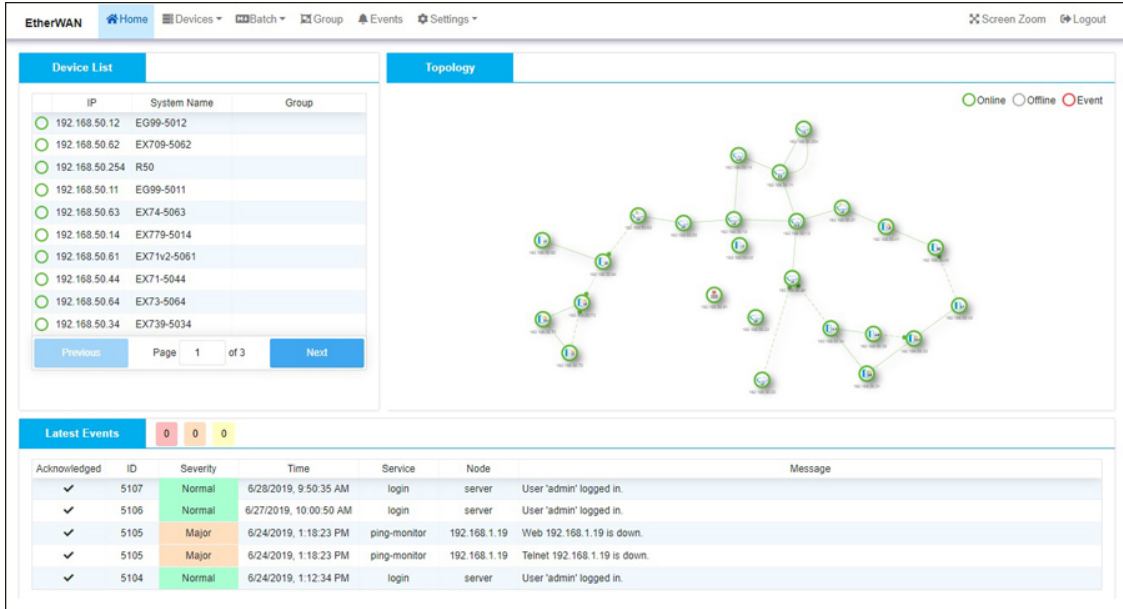
**Documentation**  
Quick Install Guide

# Application



# Software

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



The screenshot shows the EtherWAN web interface. At the top, there are navigation tabs: Home, Devices, Batch, Group, Events, and Settings. The main content area is divided into two sections: 'Device List' and 'Topology'.

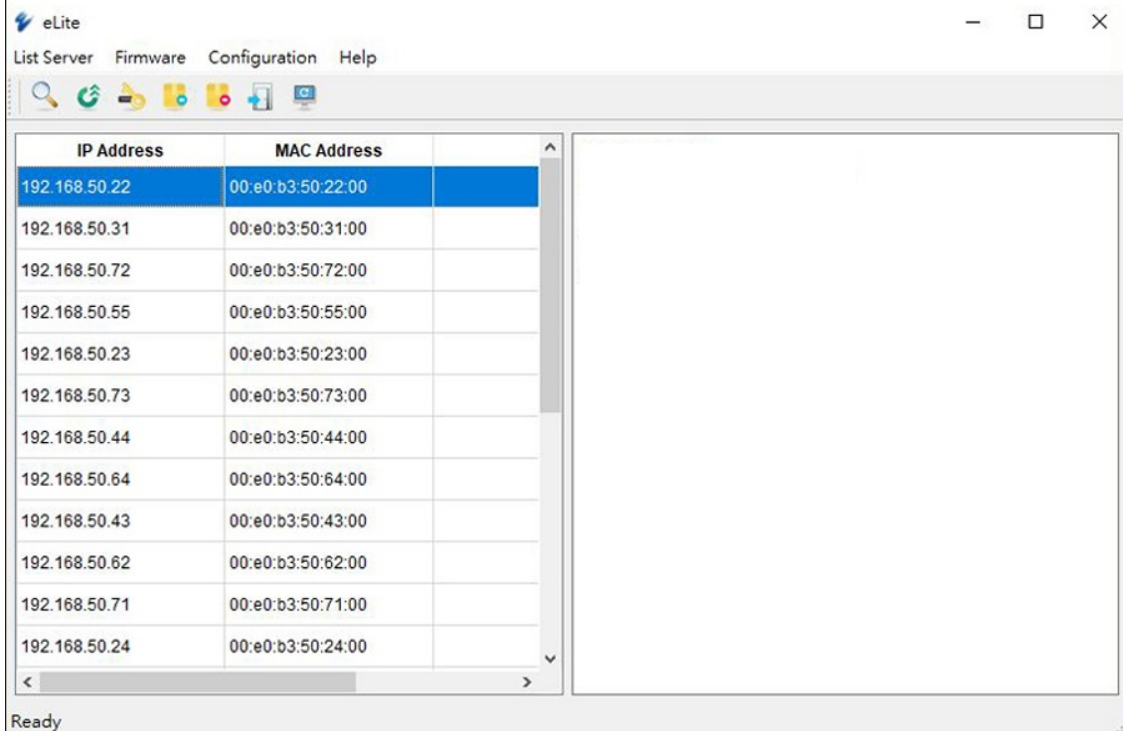
**Device List:** A table with columns for IP, System Name, and Group. It lists 12 devices, all with green status indicators.

| 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  |       |

**Topology:** A network diagram showing various nodes connected in a mesh-like structure. A legend indicates Online (green circle), Offline (grey circle), and Event (red circle).

**Latest Events:** A table with columns for Acknowledged, ID, Severity, Time, Service, Node, and Message.

| 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.      |



The screenshot shows the eLite web interface. At the top, there are navigation tabs: List Server, Firmware, Configuration, and Help. The main content area is a table with columns for IP Address and MAC Address.

| 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 |

The status bar at the bottom of the window shows 'Ready'.

## Ordering Info

### + Model

**EX73400-00B** 16-port 10/100BASE-TX  
**EX73402-0YB** 16-port 10/100BASE-TX + 2-port Gigabit (Combo)

\* DIN-Rail mounting kit included.

### + Gigabit Fiber Options (Y)

**1** 10/100/1000BASE-TX (No Gigabit Fiber port supported)  
**3** Combo port: 10/100/1000BASE-TX with 1000BASE-SX (SC) - 550m  
**4** Combo port: 10/100/1000BASE-TX with 1000BASE-SX (SC) - 2Km  
**5** Combo port: 10/100/1000BASE-TX with 1000BASE-SX (ST) - 550m  
**A** Combo port: 10/100/1000BASE-TX with 1000BASE-LX (SC) - 10Km  
**B** Combo port: 10/100/1000BASE-TX with 1000BASE-LX (SC) - 20Km

### + Accessories

|                                  |  |
|----------------------------------|--|
| <b>Hardened SFP Modules</b>      | <a href="http://www.etherwan.com/products/sfp-fiber-transceiver">www.etherwan.com/products/sfp-fiber-transceiver</a>         |
| <b>DIN-Rail Power Supplies</b>   | <a href="http://www.etherwan.com/products/din-rail-power-supply">www.etherwan.com/products/din-rail-power-supply</a><br>(* ) |
| <b>*Recommended Power Supply</b> | HDR-30-24 30W 24VDC DIN-Rail Power Supply  |
| <b>EB-232</b>                    | Configuration Backup and Restoration Tool  |

