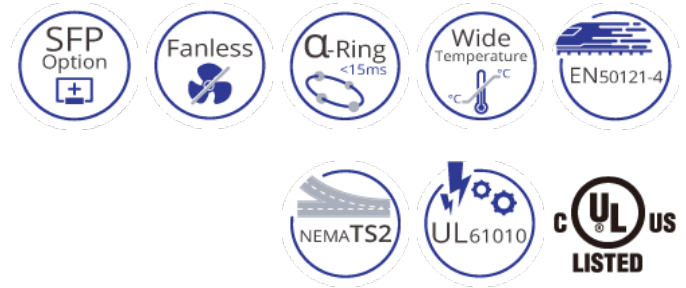


EX71000 Series

Hardened Managed 8-port 10/100BASE and 2-port Gigabit Ethernet Switch with SFP options



Overview

EtherWAN's EX71000 Series is a hardened DIN-rail mounted managed Ethernet switch platform. Equipped with up to 8 10/100BASE-TX and 2 fiber ports, the EX71000 Series provides flexibility, speed, and reliability to support networks for urban infrastructure, transportation, security, and other areas where connectivity is crucial.

EtherWAN — "When Connectivity is Crucial."

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
- Configure and monitor with eVue™ and eLite™

+ Support

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

Features

+ Interface

CLI, Telnet, Web GUI
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)
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

Specifications

+ Interface

Ethernet

4, 6 or 8 x 10/100BASE-T(X)

0 or 4 x 100BASE-FX

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, Alarm

Per Port: Link/Activity, Speed

+ 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

7.5W Max. 0.31A@24VDC

Protection
Reverse Polarity Protection

+ Physical

Casing Material
Aluminum

IP Rating
IP30

Dimensions
60 x 125 x 145mm (W x D x H)
2.36" x 4.92" x 5.7"

Weight
1.05kg

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 55032
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
ISA 12.12.01

Vibration
IEC 60068-2-6 Fc

Shock
IEC 60068-2-27 Ea

Free Fall
FED STD 101C Method 5007.1

Industrial Compliance
NEMA TS2
EN 50121-4

+ Warranty

Length
Limited Lifetime

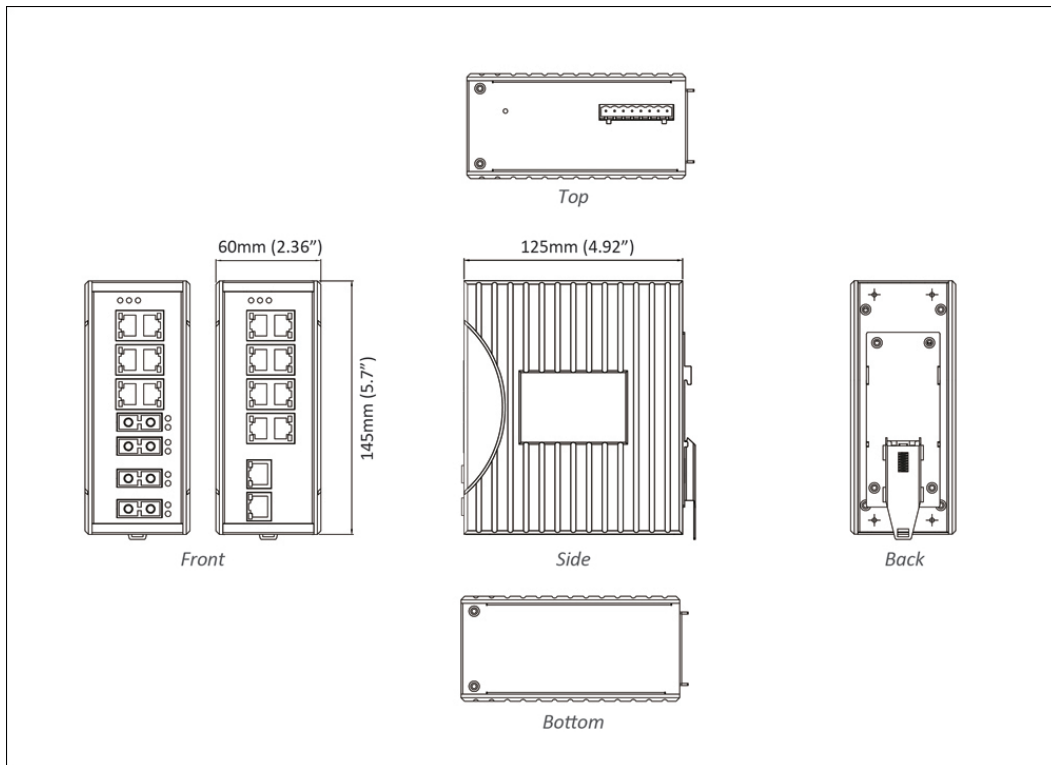
Details
www.etherwan.com/support/warranty-policy

+ What's Included

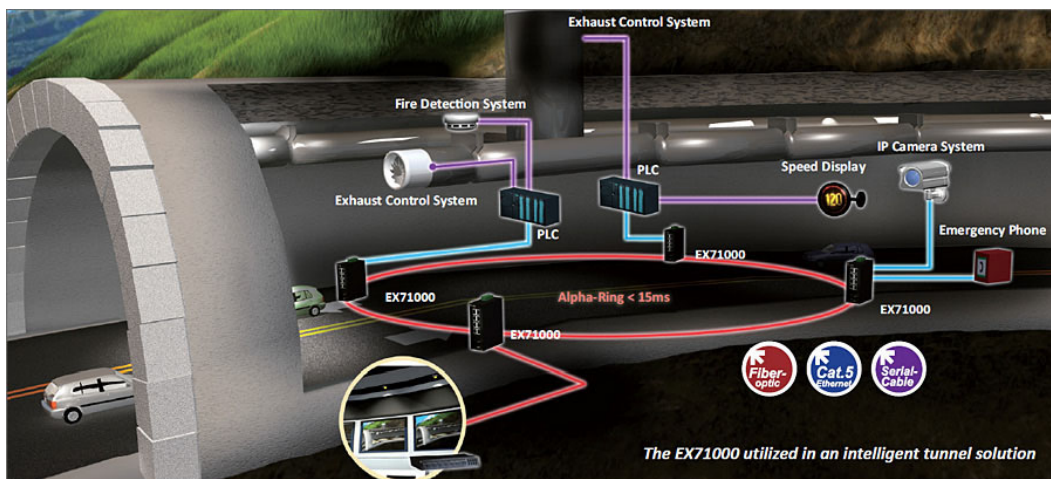
Device
Ethernet Switch

Cables
 1 Console Cable
 Documentation
 Quick Install Guide

Dimensions

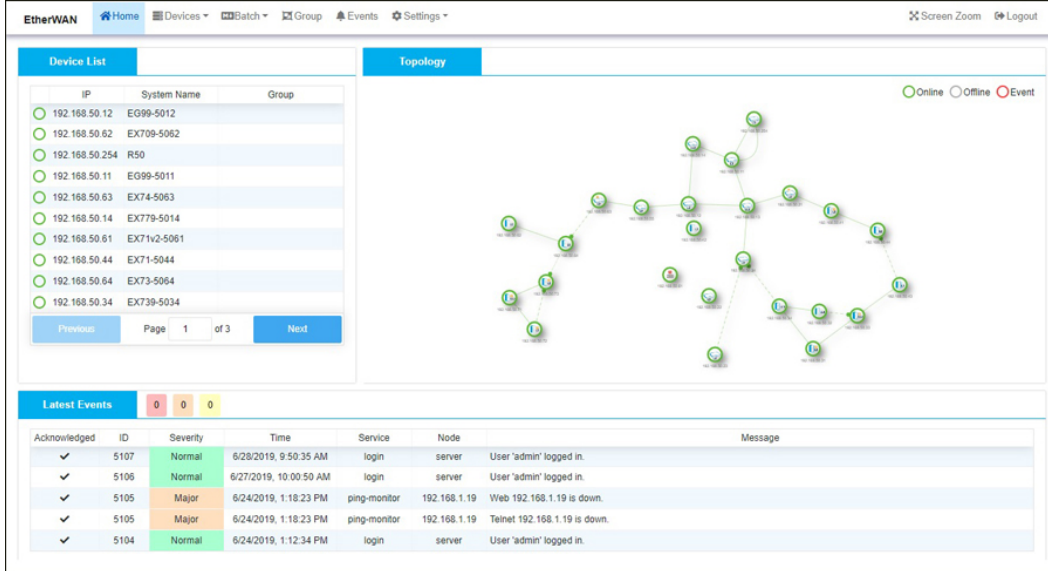


Application



Software

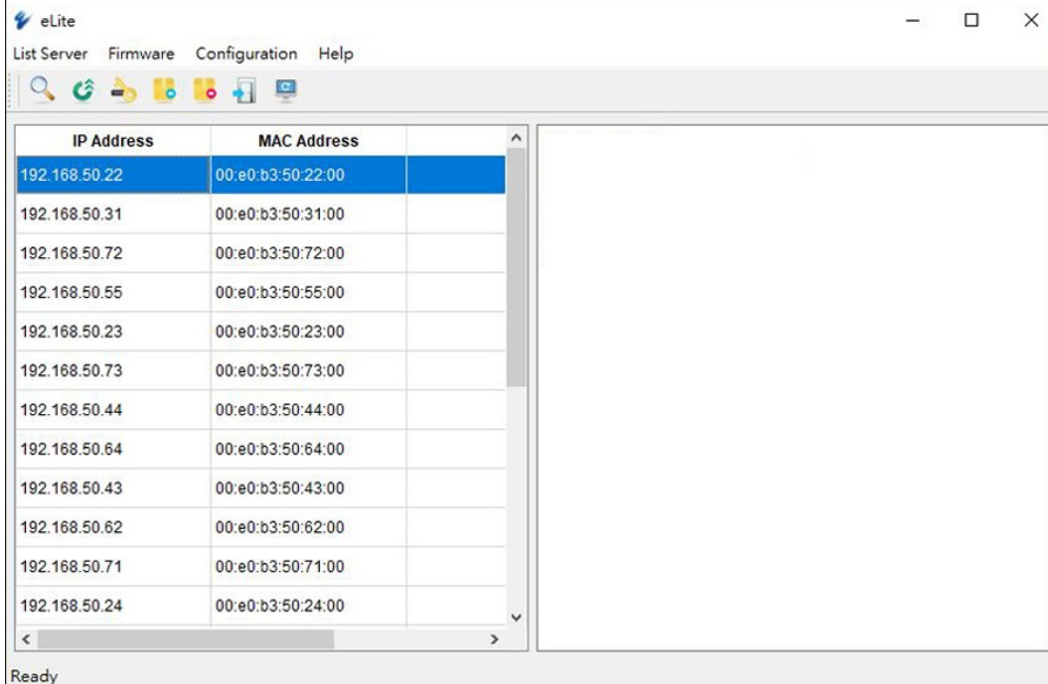
[Network Management eVue™ Network Configuration and Monitoring Tool](#)
[Network Discovery eLite™ Network Discovery and IP Configuration Tool](#)



The screenshot shows the EtherWAN web interface. On the left, there is a 'Device List' table with columns for IP, System Name, and Group. On the right, there is a 'Topology' diagram showing a network of interconnected devices. Below these, there is a 'Latest Events' section with a table of system events.

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	6/28/2019, 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 application window. It has a menu bar with 'List Server', 'Firmware', 'Configuration', and 'Help'. Below the menu is a toolbar with various icons. The main area contains a table with IP addresses and MAC addresses.

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

EX71802-0YB	8-port 10/100BASE-TX + 2-port Gigabit
EX71620-X0B	6-port 10/100BASE-TX + 2-port 100BASE-FX
EX71622-XYB	6-port 10/100BASE-TX + 2-port 100BASE-FX +2-port Gigabit
EX71440-X0B	4-port 10/100BASE-TX + 4-port 100BASE-FX

* DIN-Rail mounting kit included.

+ 100FX Fiber Options (X)

1	Multi Mode (SC) - 2Km
2	Multi Mode (ST) - 2Km
A	Single Mode (SC) - 20Km
B	Single Mode (SC) - 40Km
V	100BASE SFP (DDM)

* More 100FX Fiber options also available upon request.

+ Gigabit Port Options (Y)

1	10/100/1000BASE-TX
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
V	100/1000BASE SFP (DDM)

* More Gigabit options also available upon request.

+ Accessories

Hardened 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

