

# EX75900 Series

Hardened Managed 28-Port Gigabit PoE Ethernet Switch



## Highlights

### + High Bandwidth and Versatility

24 10/100/1000BASE-T(X) ports for High bandwidth connections  
Up to 4 1G/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  
Redundancy with VRRP  
Reduces amount of broadcast traffic

### + PoE Features

IEEE 802.3bt with 60W; 720W Power budget  
PoE watchdog monitors status of connected PoE devices

### + 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 and notifications  
Limited Lifetime Warranty

## Overview

EtherWAN's EX75900 series is a hardened managed PoE Ethernet switch platform. Equipped with 24 gigabit PoE ports along with 720W total PoE power budget, IEEE 802.3.bt protocol support and 4 10-gigabit SFP+ ports, the EX75900 series provides flexibility, speed, and reliability for networks in urban infrastructure, transportation, security, and other areas where connectivity is crucial.

EtherWAN — "When Connectivity is Crucial."

## 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

### + 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

EX75960: 56Gbps  
EX75964: 128Gbps

#### Forwarding Rate

95.23Mpps

#### Max VLANs

256 (4096 VID)

#### Jumbo Frame Size

9KB

#### MAC Table Size

16K

#### Packet Buffer Memory

12M bits

## Specifications

### + Interface

#### Ethernet

24 x 10/100/1000BASE-T(X)

4 x 1G/10G SFP+ or 4 x 1G 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

1 x Relay output, current capacity 0.5A/48VDC

#### LED Indicators

Per Unit: Power 1, Power 2, Alarm

Per Port: Link/Activity (Green)

Per PoE Port: PoE Status (Orange)

### + Technology

#### Standards

IEEE 802.3 10BASE-T

IEEE 802.3u 100BASE-TX/100BASE-FX

IEEE 802.3ab 1000BASE-T

IEEE 802.3ae 10Gigabit Ethernet

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 802.3af/at/bt Power over Ethernet

#### 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

46-57VDC Redundant (Terminal block)\*\*

\*\* 46-57VDC for IEEE 802.3af type 1, ≤15.4W PD devices.

52-57VDC for IEEE 802.3at/bt type 2/3, 30W, 60W PD devices.

54-57VDC for IEEE 802.3bt, type 4, 90W PD devices

PoE Modes

802.3af/at Mode A: Pins 1/2(-), 3/6(+)

802.3bt (60W): Mode A & B, Pins 1/2(-), 3/6(+), 4/5(+), 7/8(-)

PoE Power Output

Port: Up to 60W/port

Power Budget: 720W

Protection

Reverse Polarity Protection

## + Physical

Casing Material

Metal

IP Rating

IP30

Dimensions

442 x 270 x 44.2mm (W x D x H)

17.4" x 10.6" x 1.74"

Weight

5.1Kg (11.2lbs)

Installation Type

Rack 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)

MTBF

1,444,959 hours

## + Regulatory

ISO

Manufactured in ISO-9001 facility

EMI

FCC Part 15B Class A

VCCI Class A

EN 61000-6-4

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)

PoE Ports: line to earth 6kV Surge

EN 61000-4-6 (Induced RFI)

EN 61000-4-8 (Magnetic field)

Safety

UL 62368

Vibration

IEC 60068-2-6

Shock

IEC 60068-2-27

Free Fall

FED STD 101C Method 5007.1

Industrial

EN 50121-4

## + Warranty

Length  
Limited Lifetime

Details  
[www.etherwan.com/support/warranty-policy](http://www.etherwan.com/support/warranty-policy)

## + What's Included

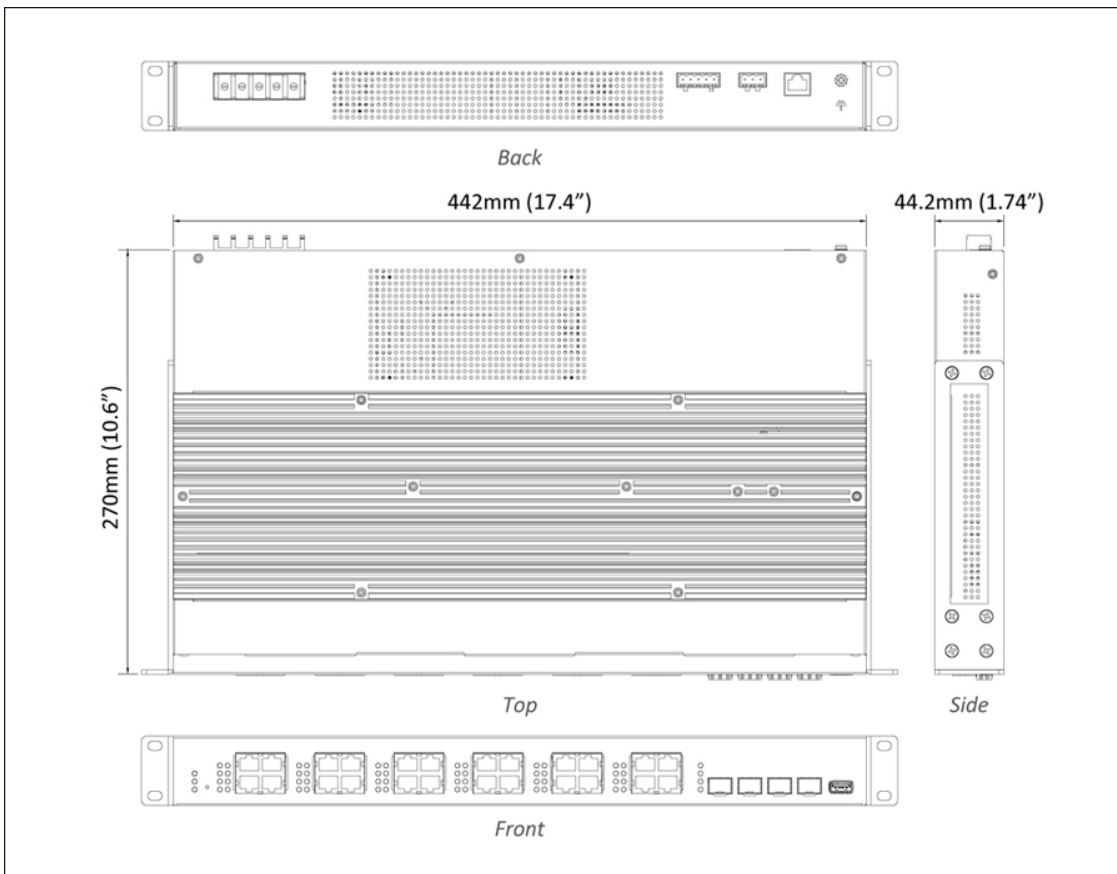
Device  
Ethernet Switch

Cables  
1 Console Cable

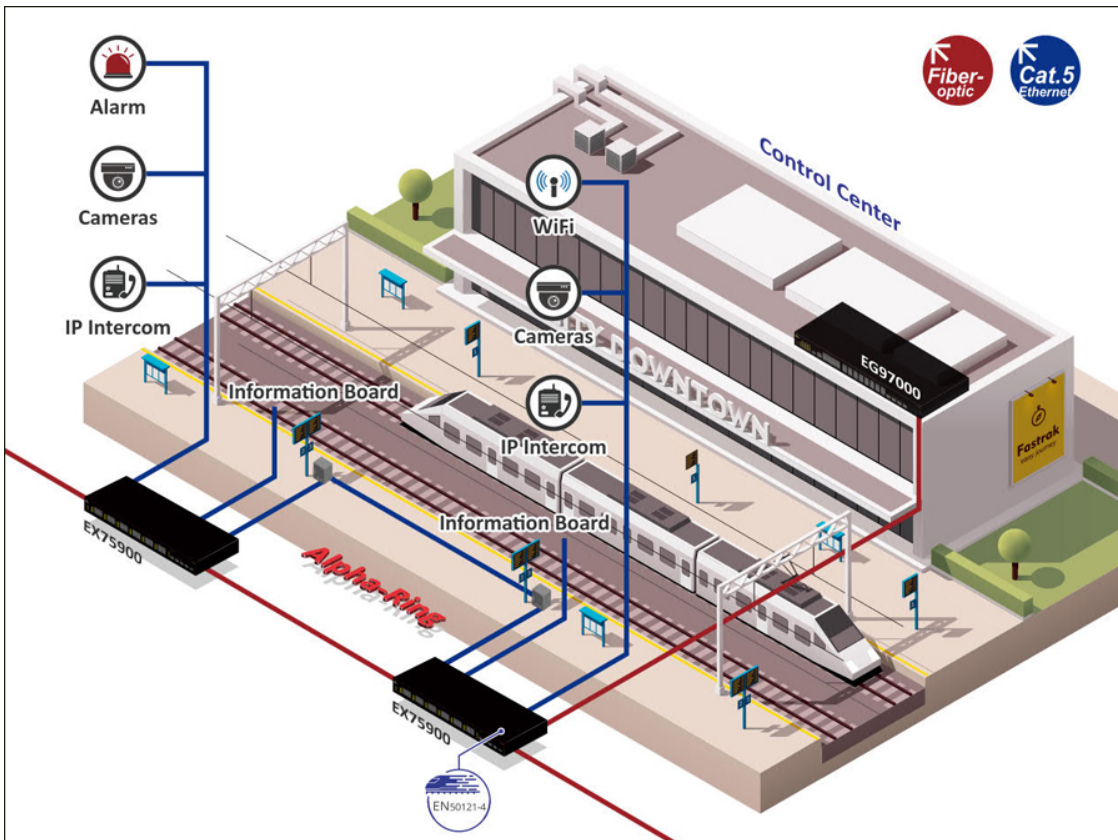
Installation  
Mounting brackets, screws

Documentation  
Quick Install Guide

## Dimensions

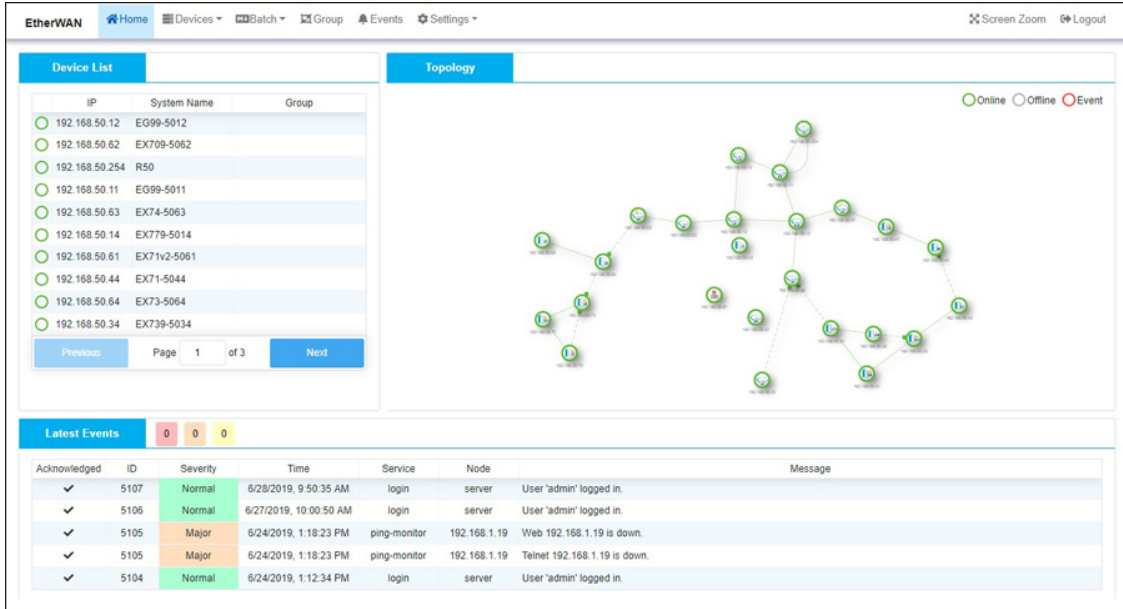


# Application



# Software

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



**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	

**Topology**

Legend: ● Online ○ Offline ○ Event

**Latest Events**

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

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

Ready



## Ordering Info

### + Model

EX75964-0VTU 24-port 10/100/1000BASE-T(X) PoE + 4-port 1G/10G SFP+  
EX75960-0VTU 24-port 10/100/1000BASE-T(X) PoE + 4-port 1000BASE SFP

### + Accessories

Hardened 100BASE SFP Modules [www.etherwan.com/products/sfp-fiber-transceiver](http://www.etherwan.com/products/sfp-fiber-transceiver)  
Hardened Gigabit SFP Modules [www.etherwan.com/products/sfp-fiber-transceiver](http://www.etherwan.com/products/sfp-fiber-transceiver)  
DIN-Rail Power Supplies [www.etherwan.com/products/din-rail-power-supply](http://www.etherwan.com/products/din-rail-power-supply)

