

# EG97000 Series

Layer 3 Hardened Managed 24-Port Gigabit and 4-Port 10G SFP+ Switch



## Overview

### [When should you use an Industrial Layer 3 switch?](#)

EtherWAN's EG97000 is a hardened layer 3 switch/router, which allow for connecting networks. With multiple gigabit SFP connections for fiber along with a 10-gigabit backbone, the EG97000 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

### + High Bandwidth and Highly Flexible Ports

16 x 100/1000M dual-rate SFP ports for multiple fiber connections  
4 x 1/10G dual-rate SFP+ ports for connections into the hub/core  
8 x 10/100/1000BASE-T RJ45 ports

### + Hardened-Grade for Non-Ventilated & Harsh Environments

Wide operating temperature range -40 to 75°C (-40 to 167°F)  
Fan-less operation  
High impact, thermal shock, and electrical noise resistance

### + Full Layer 3 Functionality

Optimized routing at hardware level  
Improved fault isolation  
Layer 3 capability connects networks together

### + Compliant Products

TAA Compliant for government projects  
NEMA TS2 rated  
UL certified for safety

### + Management/Security Features

Port control  
Storm detection and control  
Configure and monitor with eVue™ and eLite™

### + Lifetime Warranty

Complimentary Technical Support  
Free Firmware Upgrades  
Includes ECN and EOL notices

## 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  
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

**VLANS**  
IEEE 802.1Q Tag VLANs  
GVRP  
GMRP

**Link Aggregation**  
Static Trunk  
IEEE 802.3ad LACP

**IGMP Snooping v1/v2/v3**

### + Layer 3 Features IPv4

**Unicast Routing**  
Static Routing (1K)  
RIP v1/v2  
OSPF v2

**Multicast Routing**  
PIM-DM  
PIM-SM  
PIM-SSM

**Routing Redundancy**  
VRRP

### + Layer 3 Features IPv6

**IPv6 Unicast Routing**  
RIPng  
OSPF v3

**IPv6 Multicast Routing**  
PIM6-DM  
PIM6-SM

**IPv6 Routing Redundancy**  
VRRP v3

### + Software Properties and Performance

**Switching Fabric**  
128Gbps

**Forwarding Rate**  
95.23Mpps

**Total VLAN Entries**

256 (4096 VID)

**Jumbo Frame Size**

12KB

**MAC Table Size**

24K

**Packet Buffer Memory**

32M bits

**L2 Routes**

Up to 24,000 unicast and 1,000 multicast routes

**L3 IPv4 Routes**

Up to 8,000 unicast and 8,000 multicast routes

**L3 IPv6 routes**

Up to 2,000 unicast routes

## Specifications

### + Interface

#### Ethernet

8 x 10/100/1000BASE-T

16 x 100/1000BASE SFP

4 x 1G/10G SFP+

#### Console

1 x RJ45

#### Config Backup

1 x USB (Type A Connector)

#### Alarm Contact

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

#### 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

4Gb DDR3 SDRAM

#### Flash Storage

2GB



## Power

### Input

VTR: ±48VDC Redundant (Terminal block)  
VWR: 100-240VAC Redundant (Terminal block)  
VCR: 100-240VAC Redundant (AC Inlet)

Power Consumption  
75W Max

## + Physical

Casing Material  
Aluminum

Dimensions  
442 x 325 x 44mm (W x D x H)  
17.4" x 12.8" x 1.73"

Weight  
5.6kg (12.3lbs)

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

1,143,890 hours

## + Regulatory

### ISO

Manufactured in ISO-9001 facility

### EMC

EN 55032

### EMI

FCC Part 15B Class A  
VCCI Class A  
EN 61000-6-4

### EMS

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 62368

### Traffic

NEMA TS2

### Rail

EN 50121-4

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

## + What's Included

Device

Ethernet Switch

**Cables**

1 Console Cable

**Power**

1 AC Power Cord

**Installation**

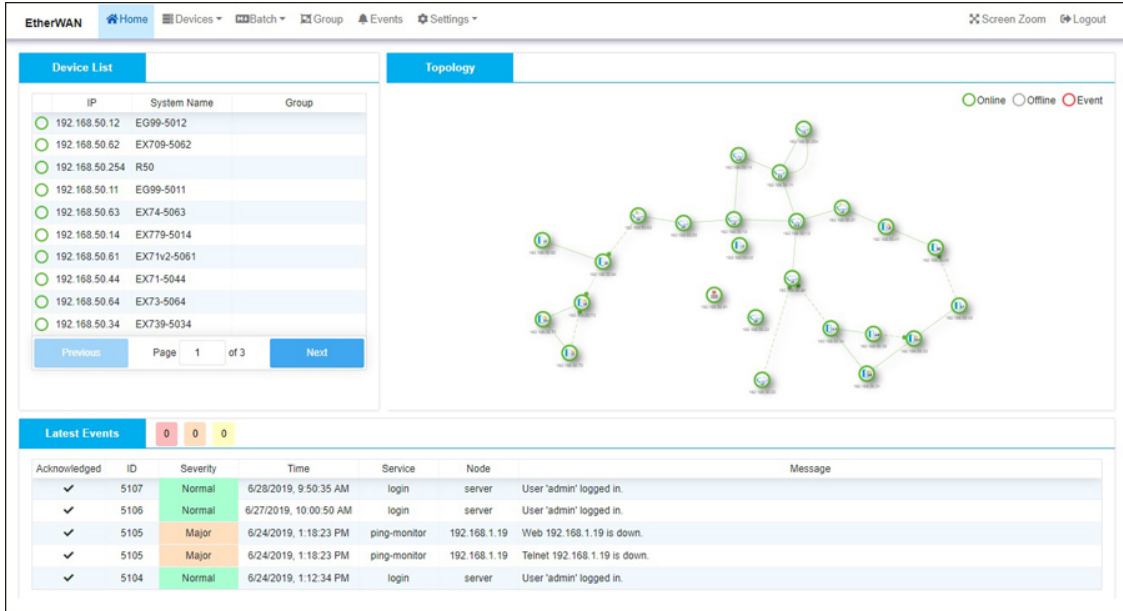
Mounting brackets, screws

**Documentation**

Quick install guide

# 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. On the right, there are links for Screen Zoom and Logout. 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 interconnected nodes. 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	Teinet 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. The title bar reads 'eLite'. The menu bar includes 'List Server', 'Firmware', 'Configuration', and 'Help'. Below the menu bar is a toolbar with various icons. 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 left shows 'Ready'.



## Ordering Info

### + Model

**EG97244-4VZ** 8-port 10/100/1000BASE-T + 16-port 100/1000BASE SFP + 4-port 1/10G SFP+ Hardened Managed Layer 3 Ethernet Switch

### + Power Input Interface (Z)

**TR** ±48VDC Redundant (Terminal Block)

**WR** 100-240VAC Redundant (Terminal Block)

**CR** 100-240VAC Redundant (AC Inlet)

### + Accessories

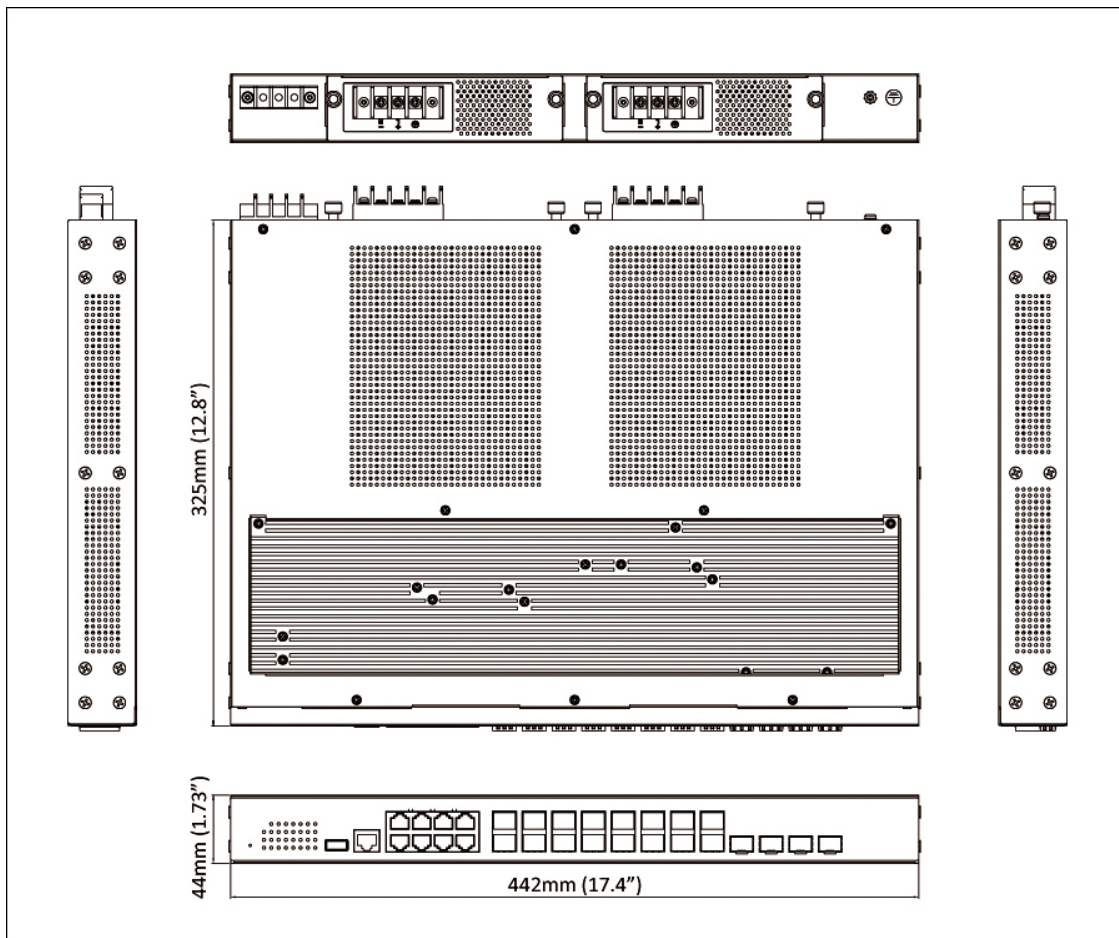
**Hardened 100BASE SFP Modules** [www.etherwan.com/products/sfp-fiber-transceiver](http://www.etherwan.com/products/sfp-fiber-transceiver)

**Hardened Gigabit SFP Modules** [www.etherwan.com/products/sfp-fiber-transceiver](http://www.etherwan.com/products/sfp-fiber-transceiver)

**Power Supplies** [www.etherwan.com/products/power-supplies/power-adapters](http://www.etherwan.com/products/power-supplies/power-adapters)  
(for TR Input Interface)

**EX41-2750A240** Spare Power Module for EG97000 series, 100-240VAC PSU (75W), AC Inlet

## Dimensions



# Application

