

## EG97000 系列

強固級網管型 8埠10/100/1000BASE-T +16埠 100/1000BASE SFP +4埠1/10G SFP+ Layer 3 乙太網路交換器



## 產品介紹

EtherWAN 的 EG97244 產品為高效能超高速第 3 層乙太網路交換器。EG97244 具有用於光纖的多個千兆位 (1G SFP) 連接埠以及 4 個 10 千兆 (10G SFP+) 的連接埠，主要定位是應用於骨幹型網路上。產品本身具有高度彈性、快速和穩定可靠的優勢，可廣泛應用於城市基礎設施、交通、安全和以及其它與網路串聯相關的網路管理工程領域中。

EtherWAN — "When Connectivity is Crucial."

## 產品亮點

### + 具高頻寬且多點網路連結的靈活性與傳輸能力+ 專案合規等級的網路產品

16 個 100/1000M 雙速率 SFP 連接埠，用於多組光纖連接  
 4 個 1/10G 雙速率 SFP+ 連接埠，用於連接到核心與集線核心層  
 8 個 10/100/1000BASE-T RJ45 連接埠，用於乙太網路的銅線連接

符合美國政府 TAA 專案標準  
 符合 NEMA TS2 等級  
 符合 UL 安全認證

### + 適用於不通風和惡劣環境的強固設計

-40 至 75°C (-40 至 167°F) 寬工作溫度範圍  
 無風扇設計  
 高耐溫衝擊和高雜訊抗噪

### + 穩定且安全的網路管理機制

連接埠端口控管 (Port control)  
 透過風暴 (Storm detection and control) 偵測和控管  
 可搭配 eVue™ 和 eLite 軟體來做網路監管

## 產品特色

### + 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)

### + 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

## + 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)

## + Software Properties and Performance

**Switching Fabric**  
32Gbps

**Forwarding Rate**  
23.5Mpps

**Max VLANs**  
256 (4096 VID)

**Jumbo Frame Size**  
9KB

**MAC Table Size**  
16K

**Packet Buffer Memory**  
12M bits

## 產品規格

### + 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 0.5A/48VDC

**LED Indicators**

Per Unit: Power 1, Power 2

Per Port: Link/Activity (Green)

Per PoE Port: PoE Status (Orange)

### + Physical

**Casing Material**

Aluminum

**IP Rating**

IP30

**Dimensions**

72 x 140 x 170mm (W x D x H)  
2.8" x 5.5" x 6.7"

**Weight**

1.5kg (3.3lbs)

**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)

**MTBF**

1,108,382 hours

## + 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 802.3az EEE  
IEEE 802.3af/at/bt Power over Ethernet  
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

## + 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)  
PoE Ports: line to earth 6kV Surge  
EN 61000-4-6 (Induced RFI)  
EN 61000-4-8 (Magnetic field)

### Safety

UL 61010

### Traffic

NEMA TS2

### Vibration

IEC 60068-2-6

### Shock

IEC 60068-2-27

### Free Fall

FED STD 101C Method 5007.1

### Industrial

EN 50121-4

## + 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

### Power Consumption

20W Max (without PoE)

### 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

Ports 1-4, 9-12: Up to 30W/port

Ports 5-8: Up to 60W/port

Power Budget: 240W

### Protection

Reverse Polarity Protection

## + 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

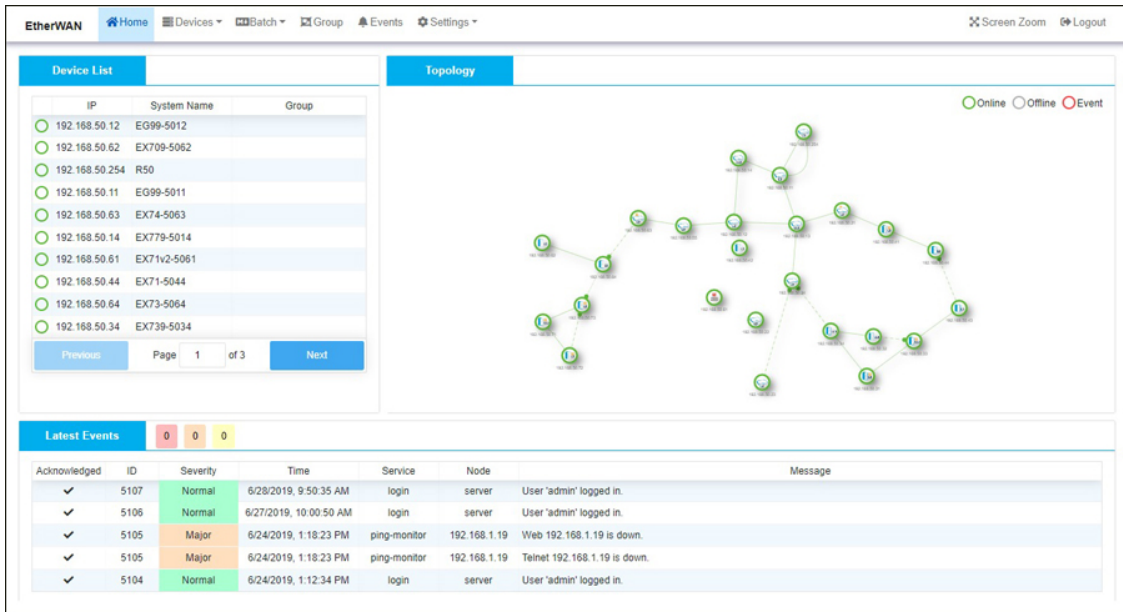
# 管理軟體

Network Management

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

Network Discovery

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

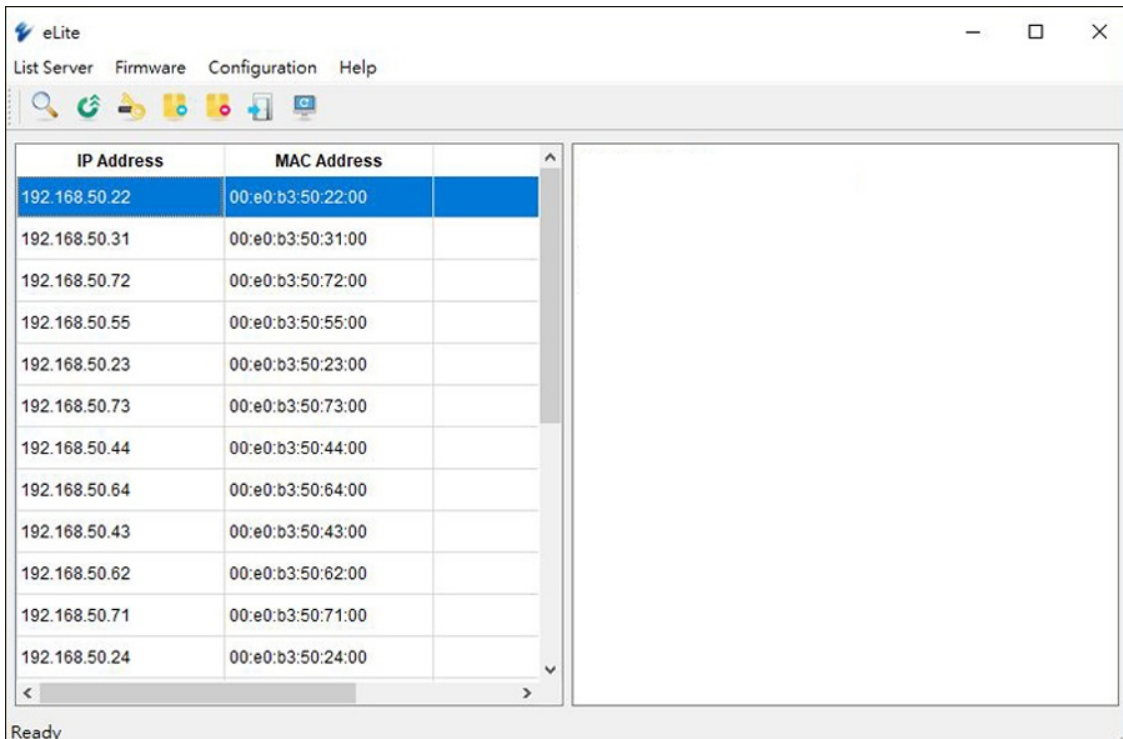


The screenshot shows the EtherWAN web interface. On the left, there is a 'Device List' table with columns for IP, System Name, and Group. On the right, there is a 'Topology' diagram showing a network of interconnected devices. Below these, there is a 'Latest Events' section with a table of system events.

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 features 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 two columns: '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

## 訂購型號

### + Model

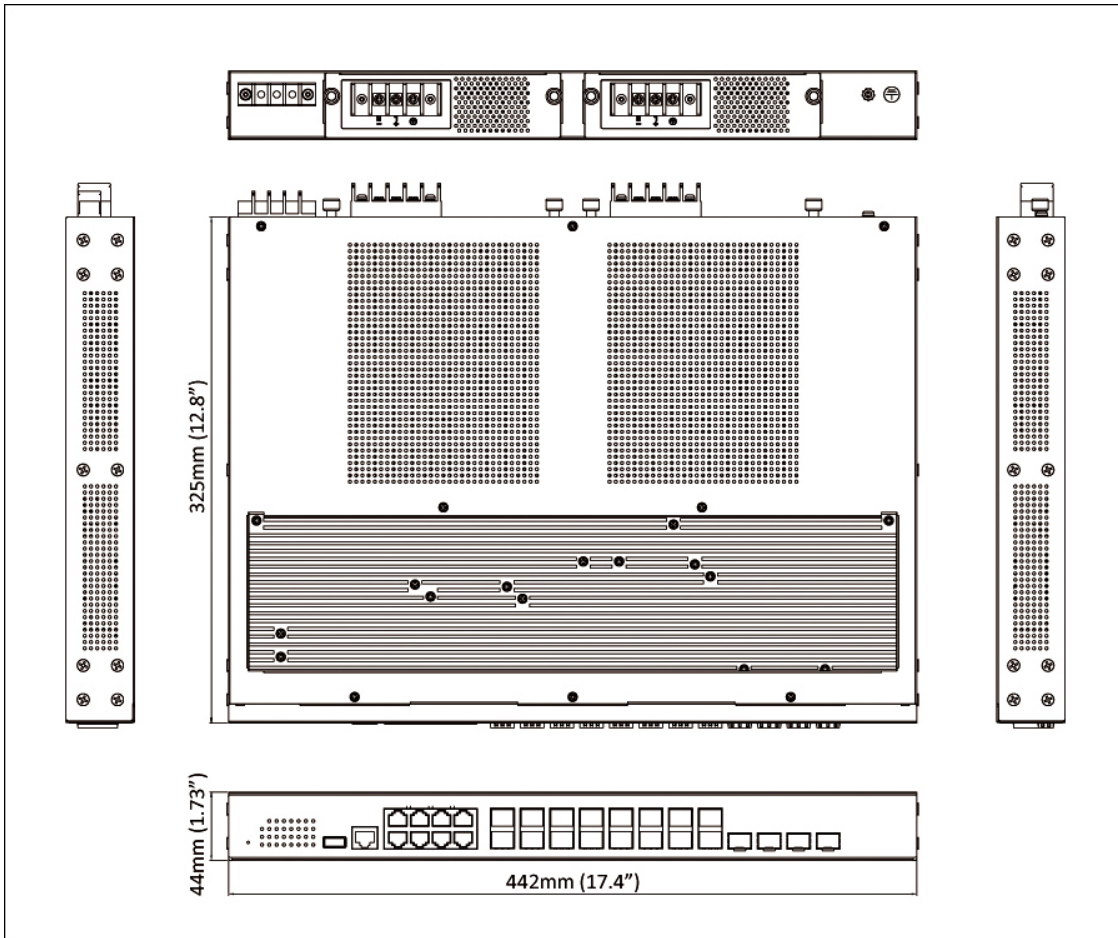
EX78934E-0VB	12-port 10/100/1000BASE-T(X) PoE + 4-port 100/1000BASE SFP
EX78924E-0VB	8-port 10/100/1000BASE-T(X) PoE + 4-port 100/1000BASE SFP
EX78922E-0VB	8-port 10/100/1000BASE-T(X) PoE + 2-port 100/1000BASE SFP

### + Accessories

Hardened 100BASE SFP Modules	<a href="http://www.etherwan.com/products/sfp-fiber-transceiver">www.etherwan.com/products/sfp-fiber-transceiver</a>
Hardened Gigabit SFP Modules	<a href="http://www.etherwan.com/products/sfp-fiber-transceiver">www.etherwan.com/products/sfp-fiber-transceiver</a>
DIN-Rail Power Supplies	<a href="http://www.etherwan.com/products/din-rail-power-supply">www.etherwan.com/products/din-rail-power-supply</a> (*)
*Recommended Power Supply	NDR-480-48 480W 48VDC DIN-Rail Power Supply



# 產品尺寸圖



## 產品應用圖

