

## EX75900 系列

強固級網管型 28 埠 Gigabit PoE 乙太網路交換器



### 產品介紹

益網 EX75900 系列是一個強固級網管型的 PoE 乙太網路交換器平台。EX75900 系列配備 24 個 Gigabit PoE 埠具備共 720W 的 PoE 功率預算、支援 IEEE 802.3bt 協定和 4 個 10-Gigabit SFP+ 埠，同時支援 IEEE 1588v2 標準的精確時間通訊協定，利用網路封包及時間戳記進行網路時間同步。為城市基礎設施、交通、安全和其他領域的重要網路連結，提供靈活、高速和可靠的通訊表現。

EtherWAN — "When Connectivity is Crucial."

### 產品亮點

#### + 高頻寬和多功能性

24個 10/100/1000BASE-T(X)埠，適用於高頻寬連接  
多達4個 1G/10G SFP+ 上行連結埠，適用於光纖連接  
全雙工運行的全容量交換

#### + 強固等級適用於不通風的惡劣環境

-40 至 75° C (-40 至 167° F) 的廣泛工作溫度範圍  
無風扇作業  
高衝擊、耐熱和電氣干擾抵抗力

#### + Lite Layer 3 功能

靜態路由、RIP v1/v2 和 OSPF  
VRRP 虛擬路由器備援協定  
廣播流量減輕

#### + PoE 乙太網供電功能

IEEE 802.3bt 支援60W PD; 720W的功率預算  
PoE 看門狗監控設備的連接狀態與自訂排程

#### + 管理/安全功能

連接埠控制  
以 802.1x 連接埠基礎之網路登入控制以及透過  
RADIUS 的遠端身份驗證  
使用 eVue™ 和 eLite™ 設定和監控

#### + 支援

提供技術支援  
免費韌體升級和通知  
有限終身保固

## 影片



## 軟體特色

### + 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)

### + 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

## 硬體規格

### + 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

IEEE 1588v2 PTP

#### 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

Power Consumption  
25.12W@52VDC, 26.65W@57VDC (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  
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

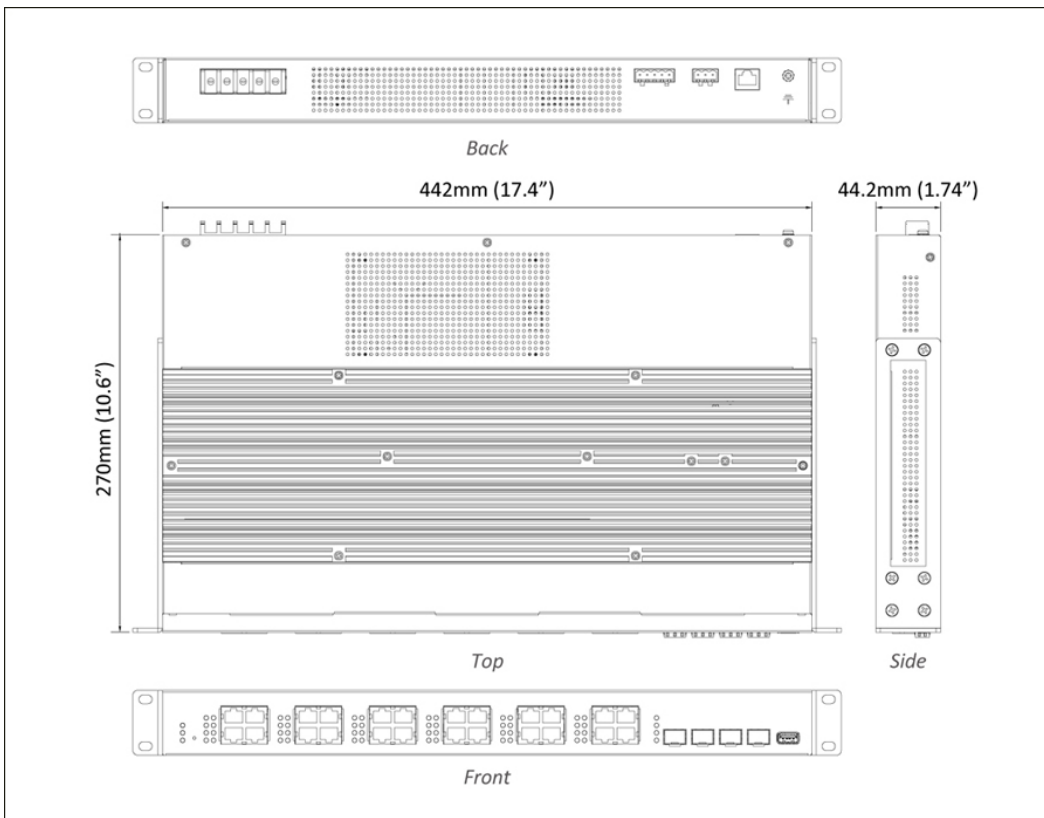
Device  
Ethernet Switch

Cables  
1 Console Cable

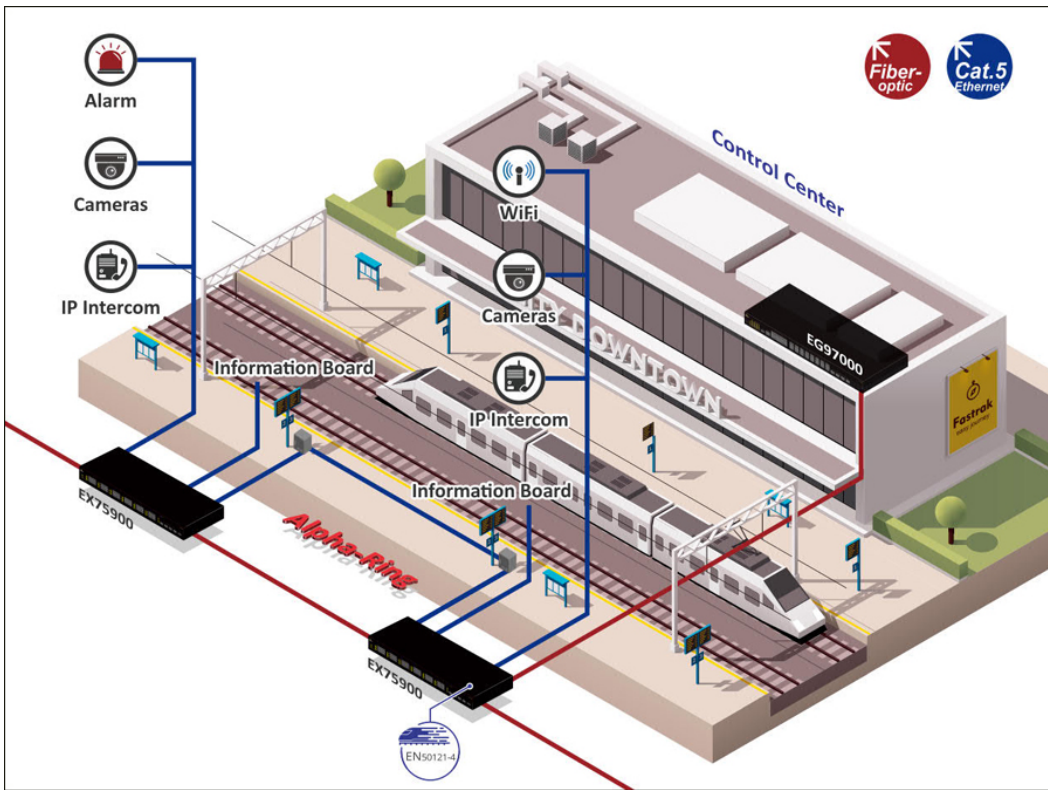
Installation  
Mounting brackets, screws

Documentation  
Quick Install Guide

## 產品尺寸圖

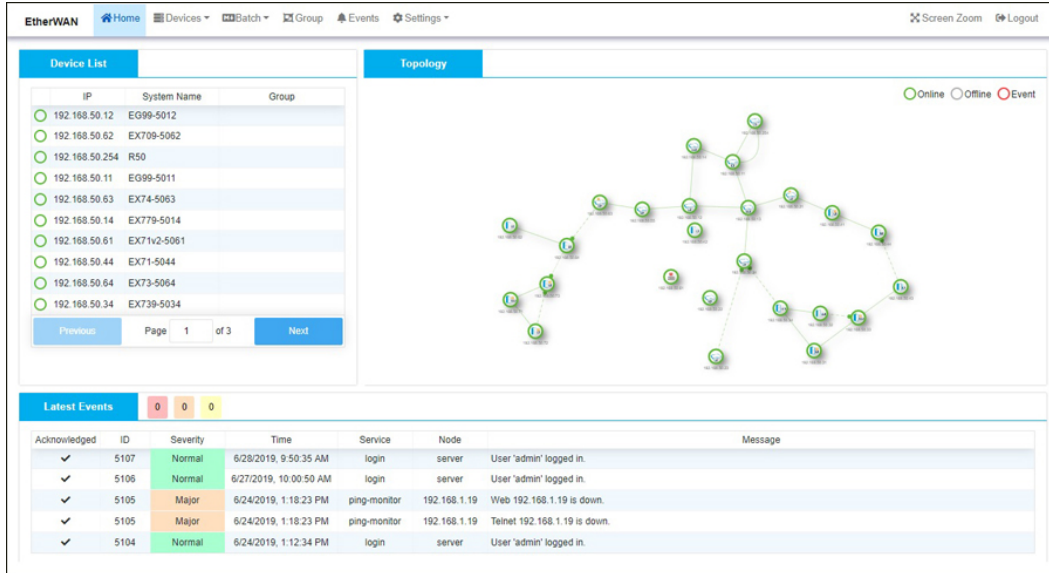


# 產品應用圖



# 軟體

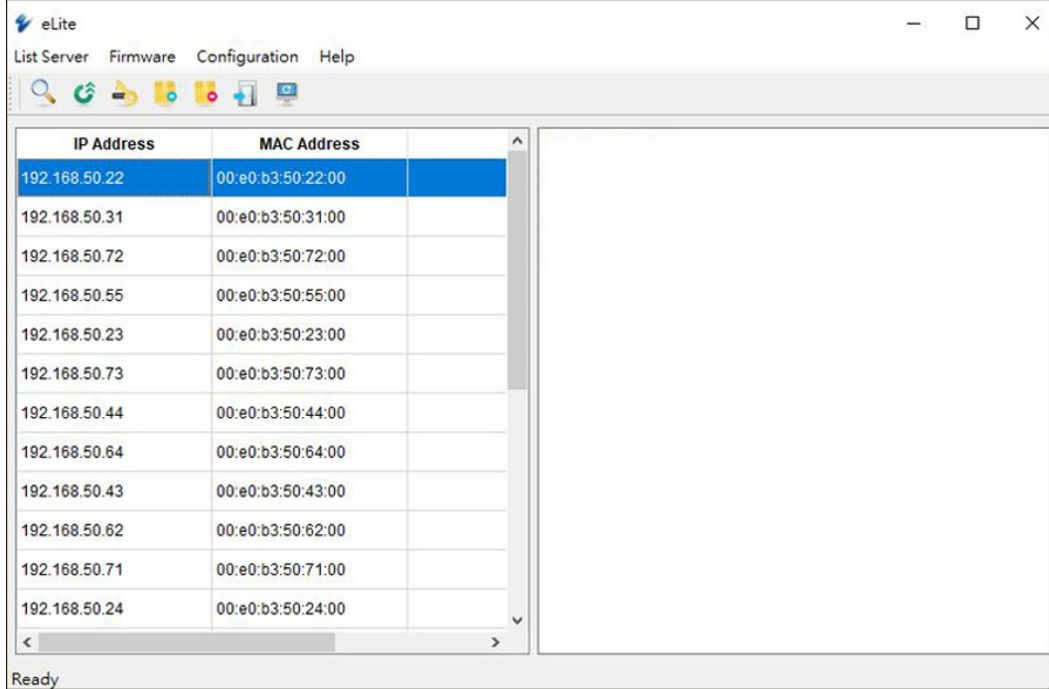
網路管理 網路管理 eVue™ 網路配置和監控工具  
 網路探索 網路探索 eLite™ 網路偵測和 IP 配置工具



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



## 訂購資訊

### + Model

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

### + Accessories

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

