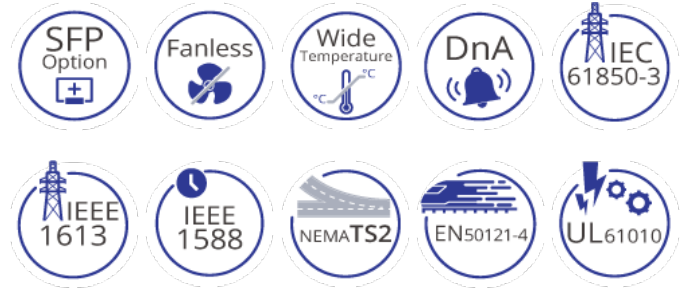


EX73900E 系列

強固級網管型 10 - 16 埠 Gigabit 乙太網路交換器



產品介紹

什麼是第三層交換器 (Layer 3 Switch) ?

益網科技 EX73900E 系列是強固級網管型導軌式乙太網交換機平台。配備多達 12 個 Gigabit 連接埠，以及 4 個雙速率 Gigabit SFP 連接埠，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

+ 高頻寬彈性配置

8或12 個 10/100/1000BASE-T(X) 高速連接埠
 多達 4 個 雙速率SFP光纖上行鏈路連接埠
 全雙工運行的全容量交換

+ 認證規範

IEC 61850-3/IEEE 1613 變電站認證
 NEMA TS2 規範
 UL 安全認證

+ 強固等級適用於不通風的惡劣環境

-40 至 75°C (-40 至 167°F)的寬工作溫度範圍
 無風扇設計
 高衝擊、耐熱和電氣干擾抵抗力

+ 管理/安全功能

連接埠控制連接埠控制，SFTP 安全檔案傳輸協定
 Dying gasp 功能在斷電時提供 SNMP 告警
 使用 eVue™ 和 eLite™ 設定和監控

+ 第三層網管功能

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

+ 服務支援

提供技術支援
 免費韌體升級和通知
 有限終身保固

軟體功能

+ 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

Total VLAN Entries

256 (4096 VID)

Jumbo Frame Size

9KB

MAC Table Size

16K

Packet Buffer Memory

12M bits

硬體規格

+ 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 0.6A/30VDC

LED Indicators

Per Unit: Power 1, Power 2, Alarm
Per Port: Link/Activity

+ Power

Input

12-48VDC Redundant (Terminal block)

Power Consumption

20W Max

Protection

Reverse Polarity Protection
Overload Current Protection

+ 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)
EN 61000-4-6 (Induced RFI)
EN 61000-4-8 (Magnetic field)

Safety

UL 61010

Traffic

NEMA TS2

Rail

EN 50121-4

Power Substation

IEC 61850-3/IEEE 1613

Vibration

IEC 60068-2-6

Shock

IEC 60068-2-27

Free Fall

FED STD 101C Method 5007.1

+ 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 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

+ Warranty

Length

Limited Lifetime

Details

www.etherwan.com/support/warranty-policy

+ Physical

Casing Material

Aluminum

IP Rating

IP40

Dimensions

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

Weight

1.4kg (3.08lbs)

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)

+ What's Included

Device

Ethernet Switch

Cables

1 Console Cable

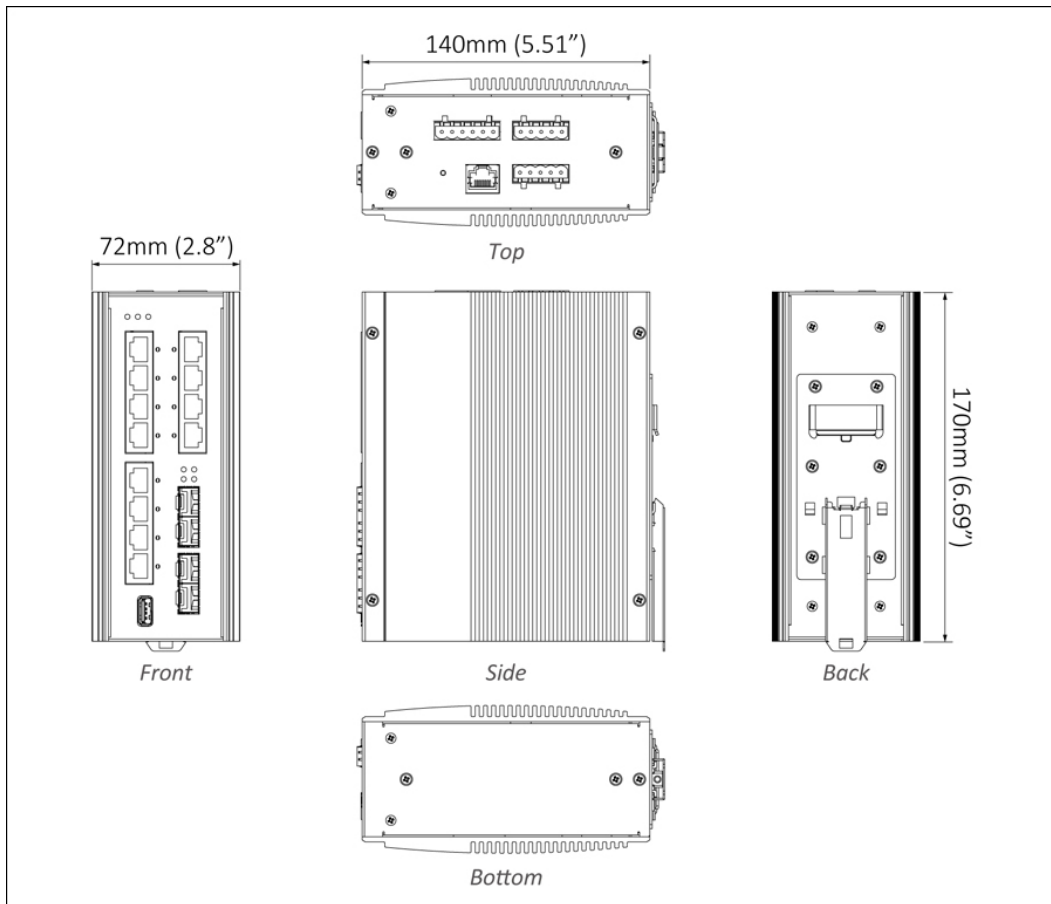
Installation

Mounting brackets, screws

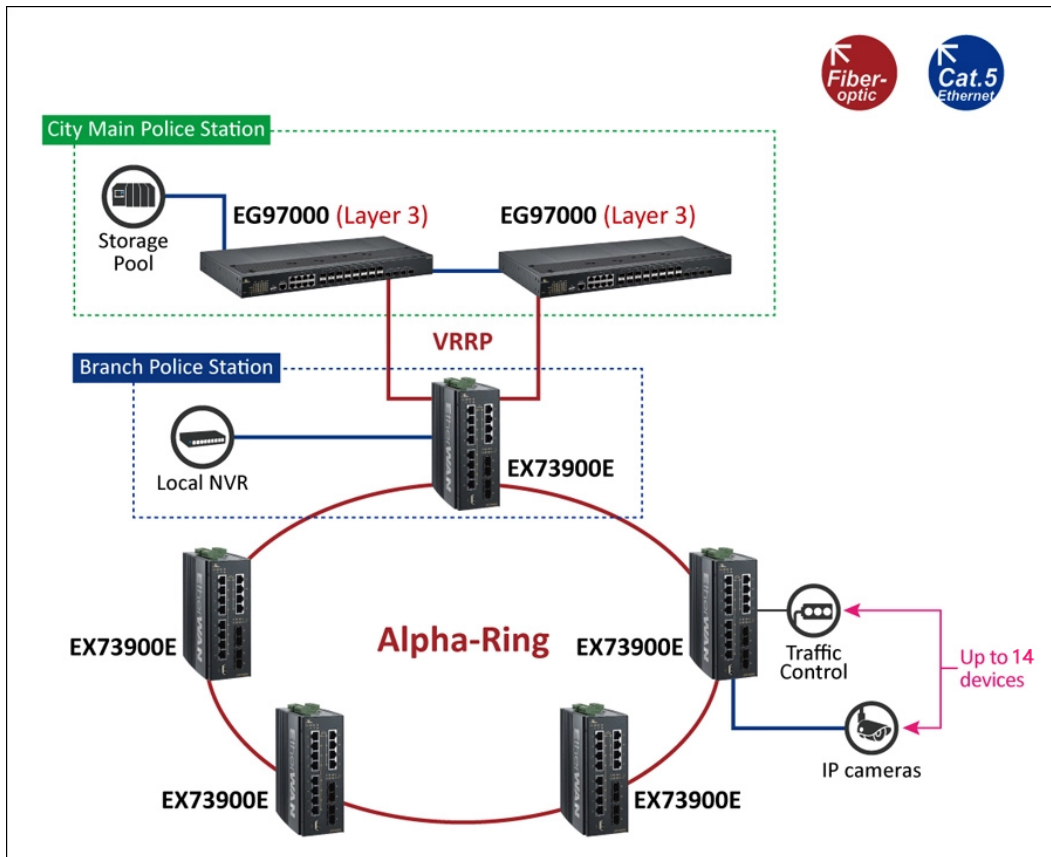
Documentation

Quick install guide

產品尺寸圖



應用圖



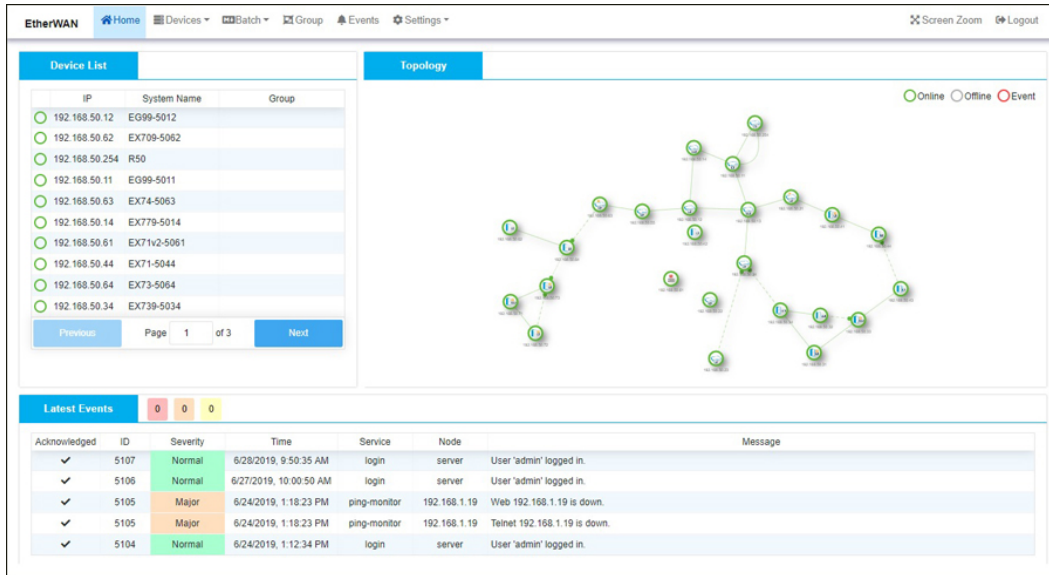
軟體工具

網路管理

[eVue™ 網路配置和監控工具](#)

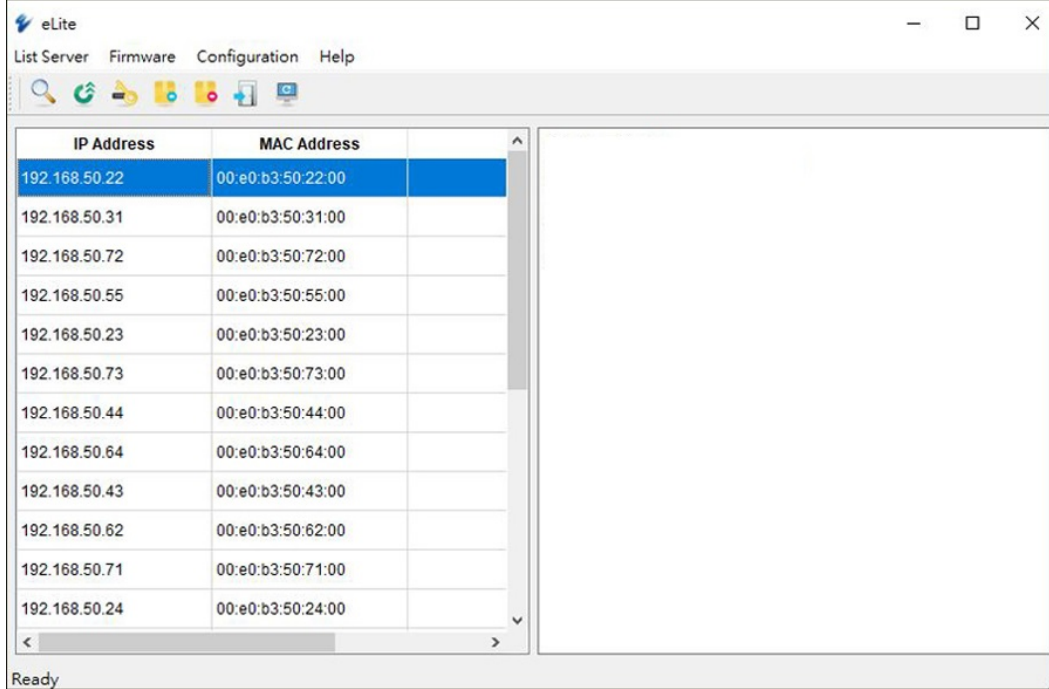
網路探索

[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. The table contains 12 entries, all with green status indicators. On the right, there is a 'Topology' diagram showing a network of interconnected nodes, with a legend for Online (green), Offline (grey), and Event (red). Below the topology, there is a 'Latest Events' section with a table of event logs.

Acknowledged	ID	Severity	Time	Service	Node	Message
✓	5107	Normal	6/29/2019, 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 several icons. The main area contains a table with two columns: 'IP Address' and 'MAC Address'. The table lists 14 entries, with the first row highlighted in blue.

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

EX73934E-0VB	12 埠 10/100/1000BASE-T(X) + 4 埠 100/1000BASE SFP
EX73924E-0VB	8 埠 10/100/1000BASE-T(X) + 4 埠 100/1000BASE SFP
EX73922E-0VB	8 埠 10/100/1000BASE-T(X) + 2 埠 100/1000BASE SFP

+ 配件選購

強固級 100BASE SFP 模組	www.etherwan.com/tw/products/sfp-fiber-transceiver
強固級 Gigabit SFP 模組	www.etherwan.com/tw/products/sfp-fiber-transceiver
DIN 導軌式電源供應器	www.etherwan.com/tw/products/din-rail-power-supply (*)
*推薦電源供應器	EX41-145046 Power Supply 45W 12VDC with Open Wire

