

EX73900X 系列

強固級網管型 12 埠 Gigabit + 4 埠 10G SFP+ 乙太網路交換器



產品介紹

益網科技 EX73900X 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 10-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

12 個 10/100/1000BASE-T(X) 高速連接埠
 多達 4 個 1G/10G 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，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, SSH

+ Management

Firmware upgrade
SFTP (Secured FTP) support
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
TLS and HTTPS for Web security
ACL (Access Control List, up to 4096 entries)
Storm Detection Support

+ 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
104Gbps

Forwarding Rate
75.29Mpps

Max VLANs
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 1/10G 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

+ 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 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
12-48VDC Redundant (Terminal block)

Power Consumption
20W Max

Protection
Reverse Polarity Protection

+ 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
1.4kg (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)

+ 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

+ Warranty

Length
Limited Lifetime

Details
www.etherwan.com/support/warranty-policy

+ What's Included

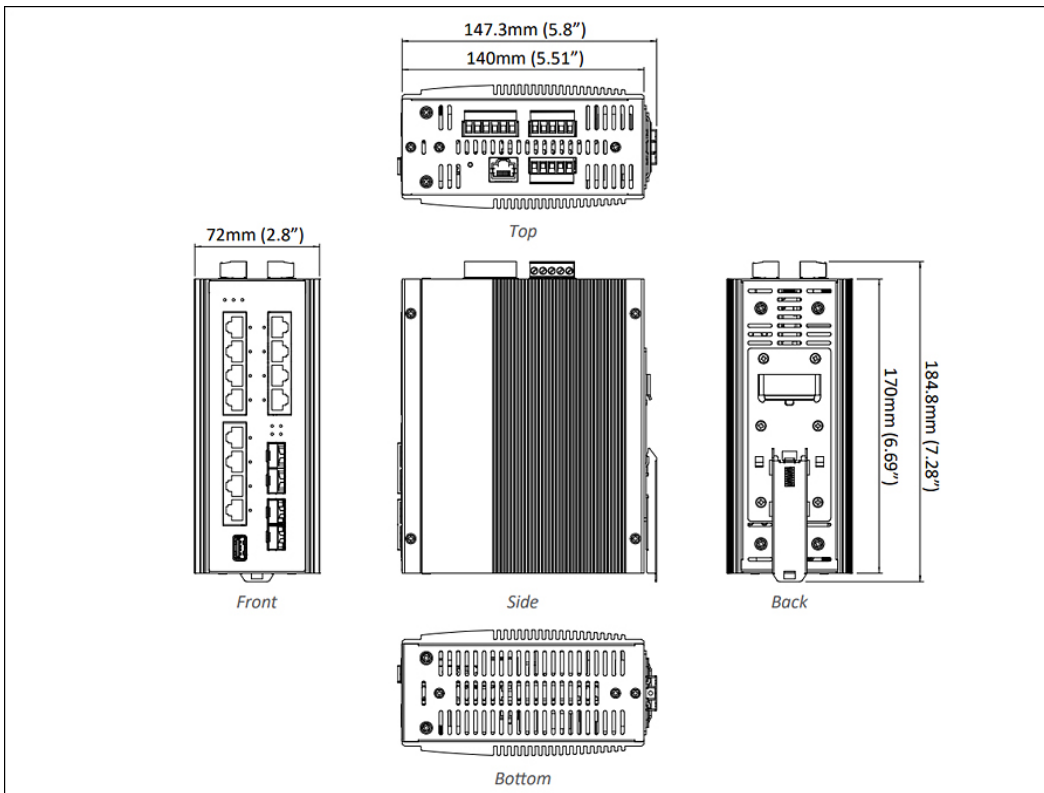
Device
Ethernet switch

Cables
1 Console cable

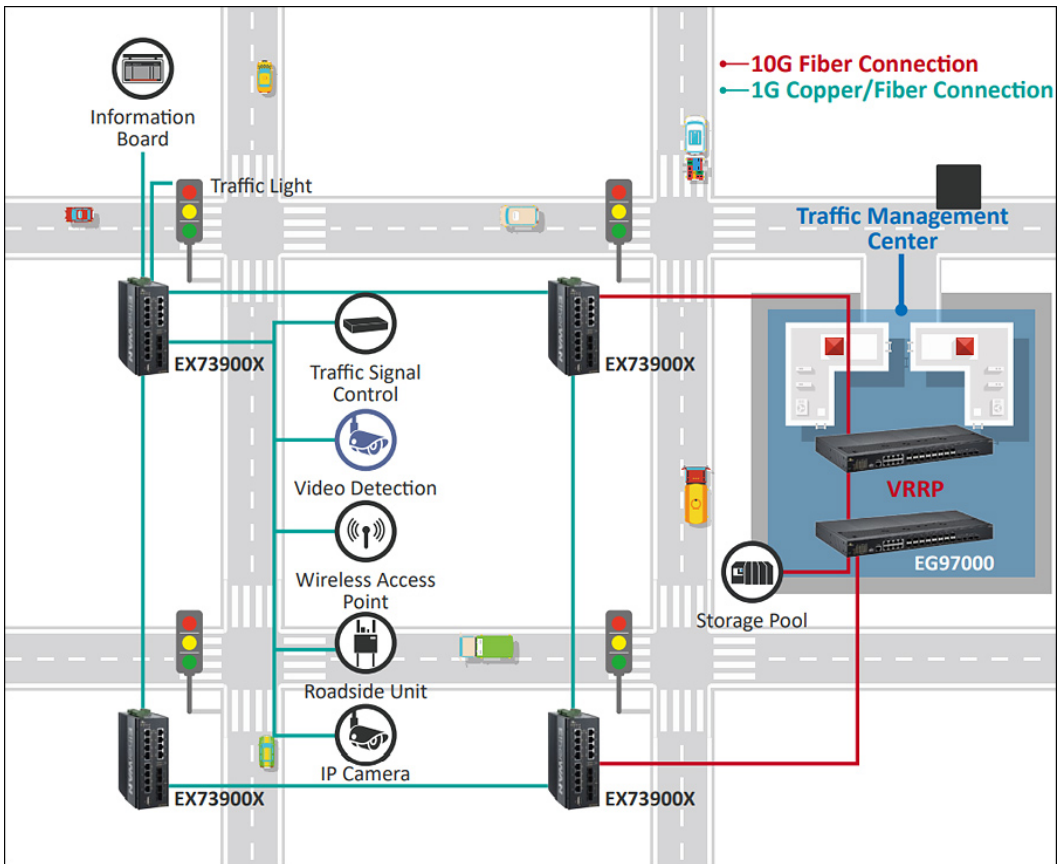
Installation
Mounting brackets, screws

Documentation
Quick install guide

產品尺寸圖



應用圖



軟體工具

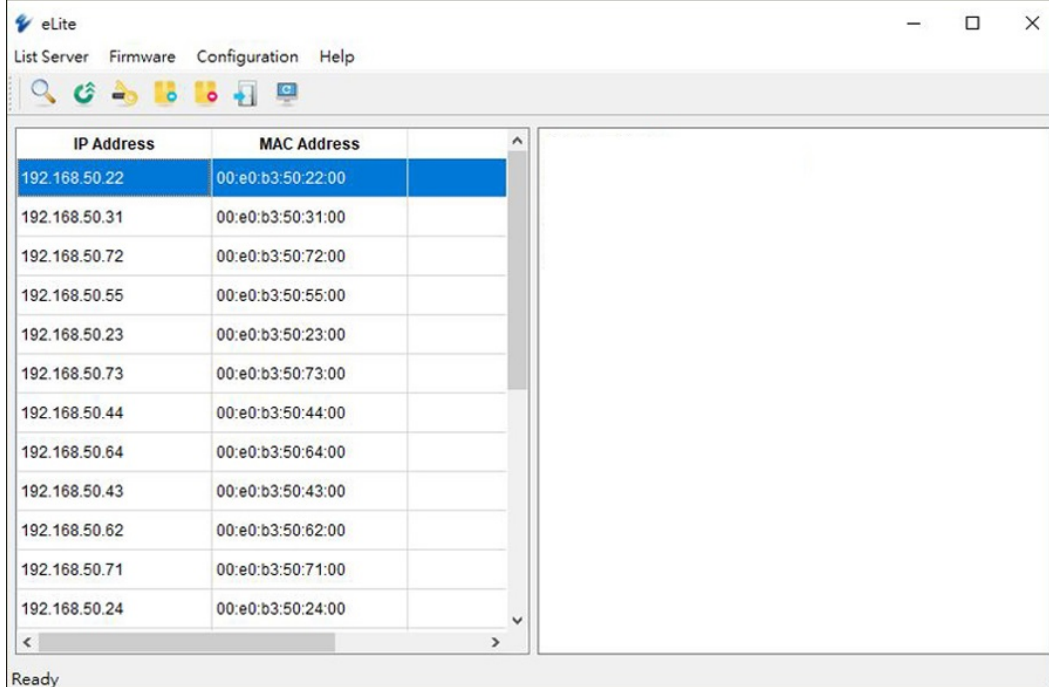
網路管理 eVue™ 網絡配置和監控工具
 網路探索 eLite™ 網絡偵測和 IP 配置工具



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 |

訂購型號

+ Model

EX73934X-0VB 12-port 10/100/1000BASE-T(X) + 4-port 1/10G SFP+

EX73924X-0VB 8-port 10/100/1000BASE-T(X) + 4-port 1/10G SFP+

EX73922X-0VB 8-port 10/100/1000BASE-T(X) + 2-port 1/10G SFP+

+ 配件選購

強固級 Gigabit / 10 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

