

EX73900 系列

IEC 61850-3/IEEE 1613 Lite L3 強固級網管型 12 - 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 EX73900 系列強固級乙太網路交換器，提供高達 12 個 10/100/1000BASE-TX + 4 個 Gigabit SFP 埠。搭配益網獨家技術 Alpha-Ring 環狀網路備援機制，可在網路發生斷線時迅速啟動備援機制，於 15 毫秒內便可快速恢復連線。完整管理功能，包含 Port Security、IGMP Snooping、VLANs、GARP 協定、Link Aggregation 和 ACL；使用者可透過網頁瀏覽 Telnet、SSH、SNMP、RMON、TFTP 和 RS-232 Console 管理介面。

EX73900 系列專為嚴峻戶外環境設計打造，鋁軌式安裝，符合 IEC 61850 & IEEE 1613 標準，可在高 EMI 環境及 -40 到 75°C 寬溫環境下穩定運作，在嚴峻的專案規劃佈局中扮演致勝的關鍵角色。

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 Gigabit 光纖上行鏈路連接埠
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

+ 簡配第 3 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

+ 認證規範

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

+ 管理/安全功能

連接埠控制
支援 RADIUS 優化網路安全機制
使用 eVue™ 和 eLite™ 設定和監控

+ 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

產品特色

+ Interface

CLI, Telnet, Web Browser
SNMP v1/v2c/v3

+ Management

Firmware upgrade
Configuration backup via TFTP
DHCP Server/Client
RMON (Remote Monitoring): group 1, 2, 3, 9
Port Mirroring: TX/RX and both
NTP (Network Time Protocol) synchronization
IEEE 802.1ab LLDP (Link Layer Discovery Protocol)
IPv4/IPv6

+ Security

MAC Address Filtering
Enable/Disable port
Storm control (Broadcast and multicast types)
IEEE 802.1x LAN Access Control
Remote authentication through RADIUS and TACACS+
SSH for CLI and Telnet security
SSL for web security
System log (Remote/Local)
ACL (Access Control List, up to 4096 entries)

+ Quality of Service (QoS)

Priority Queues: 4 queues per port
Traffic classification based on IEEE 802.1p CoS, DSCP, WRR and strict mode
Rate Limiting (Ingress/Egress)

+ Layer 2 Features

Auto-negotiation for port speed and duplex mode

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 (128 groups, 4096 VID)
GVRP
GMRP

Link Aggregation

Static Trunk (4 groups, support MAC base)
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

產品規格

+ Interface

Ethernet

8 or 12 x 10/100/1000BASE-T(X)
4 x 1000BASE SFP

Console

1 x DB9 RS-232

Alarm Contact

1 x Relay output, current capacity 0.6A/30VDC

LED Indicators

Per Unit: Power 1, Power 2
Per Port: Link/Activity (Green)

+ Technology

Standards

IEEE 802.3 10BASE-T
IEEE 802.3u 100BASE-TX/100BASE-FX
IEEE 802.3ab 1000BASE-T
IEEE 802.3z 1000BASE-SX/1000BASE-LX
IEEE 802.3x Full duplex and flow control
IEEE 802.1p QoS
IEEE 802.1Q Tag VLANs
IEEE 802.1w RSTP
IEEE 802.1x PNAC

Forward/Filtering Rate

14,880pps for 10Mbps
148,810pps for 100Mbps
1,488,100pps for 1000Mbps

Packet Buffer Memory

12M bits

Processing Type

Store-and-Forward
Auto-negotiation
Half-duplex back-pressure and IEEE 802.3x Full-duplex flow control
Auto MDI/MDIX

Address Table Size

16K MAC Addresses

+ Environmental

Operating Temp.

-40 to 75°C (-40 to 167°F)
Tested @ -40 to 85°C (-40 to 185°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

Vibration

IEC 60068-2-6 Fc

Shock

IEC 60068-2-27 Ea

Free Fall

FED STD 101C Method 5007.1

Industrial Compliance

IEC 61850-3/IEEE 1613
NEMA TS2

+ Power

Input

12-48VDC Redundant (Terminal block)

Power Consumption

17.28W Max. 1.44A@12VDC, 0.72A@24VDC

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 (3.09lbs)

Installation Type

DIN-rail mounting

+ Warranty

Length

Limited Lifetime

Details

www.etherwan.com/support/warranty-policy

+ What's Included

Device

Ethernet Switch

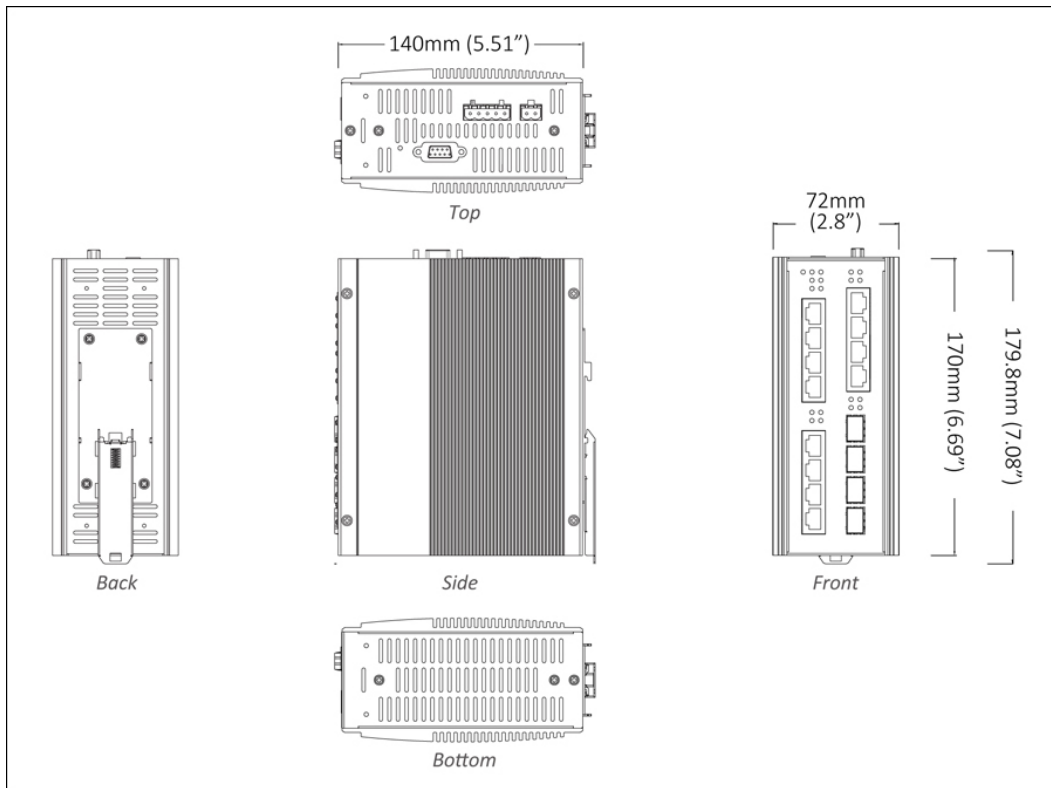
Cables

1 Console Cable

Documentation

Quick Install Guide

產品尺寸圖



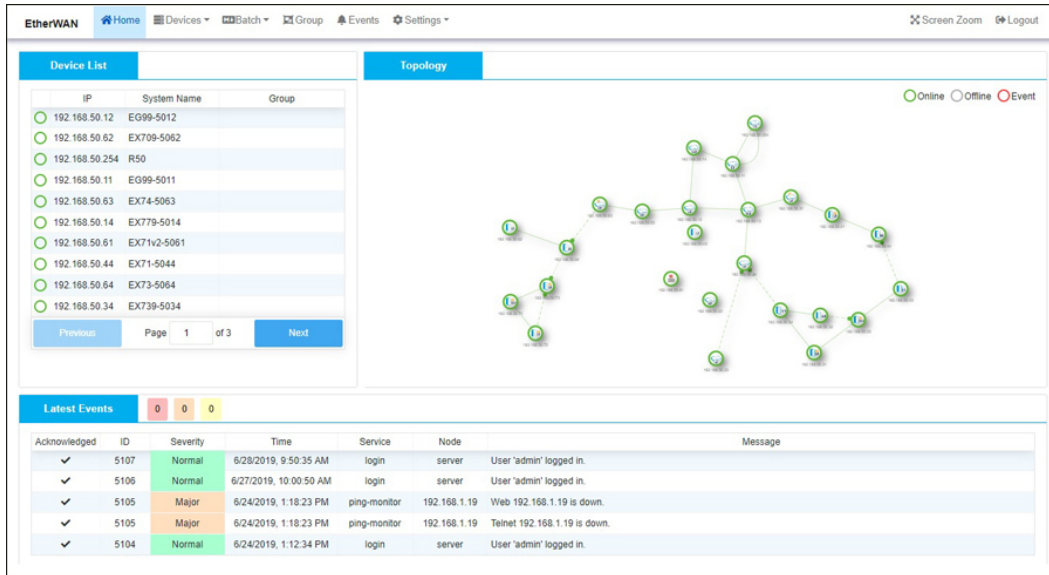
管理軟體

Network Management

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

Network Discovery

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



Device List

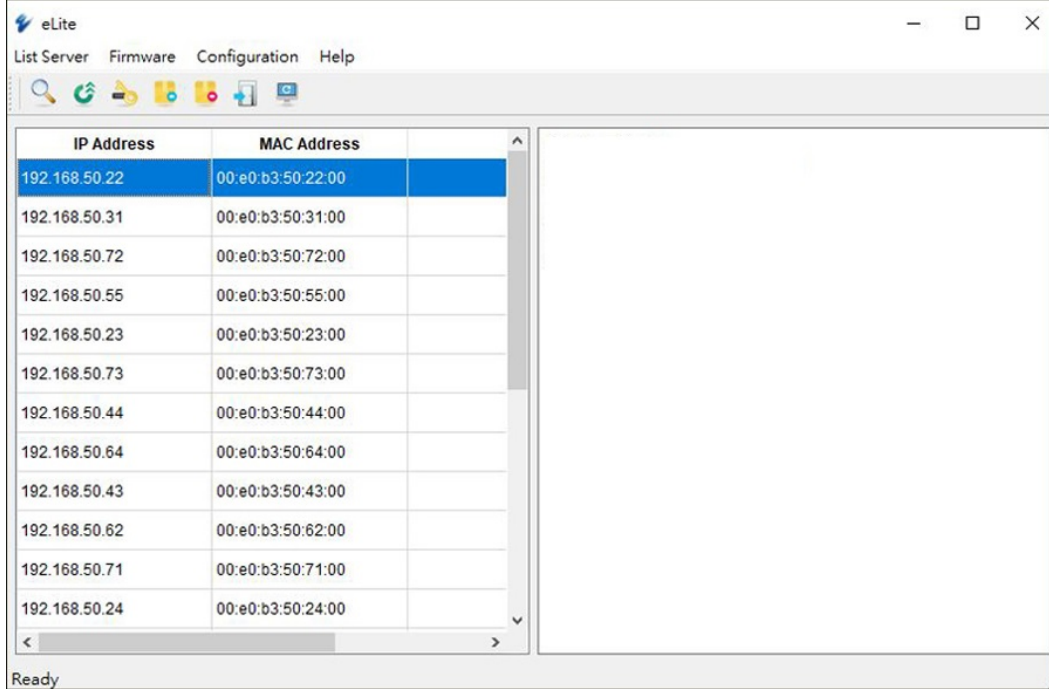
IP	System Name	Group
192.168.50.12	EG99-5012	
192.168.50.62	EX709-5062	
192.168.50.254	R50	
192.168.50.11	EG99-5011	
192.168.50.63	EX74-5063	
192.168.50.14	EX779-5014	
192.168.50.61	EX71v2-5061	
192.168.50.44	EX71-5044	
192.168.50.64	EX73-5064	
192.168.50.34	EX739-5034	

Topology

Legend: ● Online ○ Offline ○ Event

Latest Events

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.



eLite

List Server Firmware Configuration Help

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

Ready

訂購型號

+ Model

EX73931-0VB	12-Port 10/100/1000BASE-TX + 4-port Gigabit SFP
EX73921-0VB	8-Port 10/100/1000BASE-TX + 4-Port Gigabit SFP

* DIN-Rail mounting kit included.

* [EX73921-0XB EOL Notice](#)

+ Accessories

Hardened Gigabit SFP Modules	www.etherwan.com/products/sfp-fiber-transceiver
DIN-Rail Power Supplies	www.etherwan.com/products/din-rail-power-supply (*)
*Recommended Power Supply	HDR-30-24 30W 24VDC DIN-Rail Power Supply



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