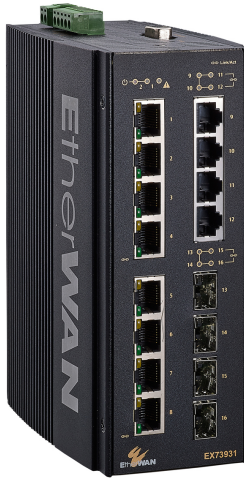


EX73900 系列

IEC 61850-3/IEEE 1613 Lite L3 強固級網管型 12-16埠Gigabit 乙太網路交換器



產品亮點

+ High Bandwidth and Versatility

8 or 12 10/100/1000BASE-T(X) ports for high bandwidth connections
Up to 4 gigabit fiber connections
Full capacity switching running at full duplex

+ Hardened-Grade for Non-Ventilated & Harsh Environments

Wide operating temperature range -40 to 75°C (-40 to 167°F)
Fanless operation
High impact, thermal shock, and electrical noise resistance

+ Lite Layer 3 Functionality

Static routing, RIP v1/v2, and OSPF support
Redundancy with VRRP
Reduces amount of broadcast traffic

+ Compliance

IEC 61850-3/IEEE 1613 certified for power substations
NEMA TS2 rated
UL certified for safety

+ Management/Security Features

Port control
RADIUS remote authentication
Configure and monitor with eVue™ and eLite™

+ Support

Complimentary Technical Support
Free Firmware Upgrades
Limited Lifetime Warranty

產品介紹

[When should you use an Industrial 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、GMP 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 SX/LX/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

+ 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

+ 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

+ Warranty

Length
Limited Lifetime

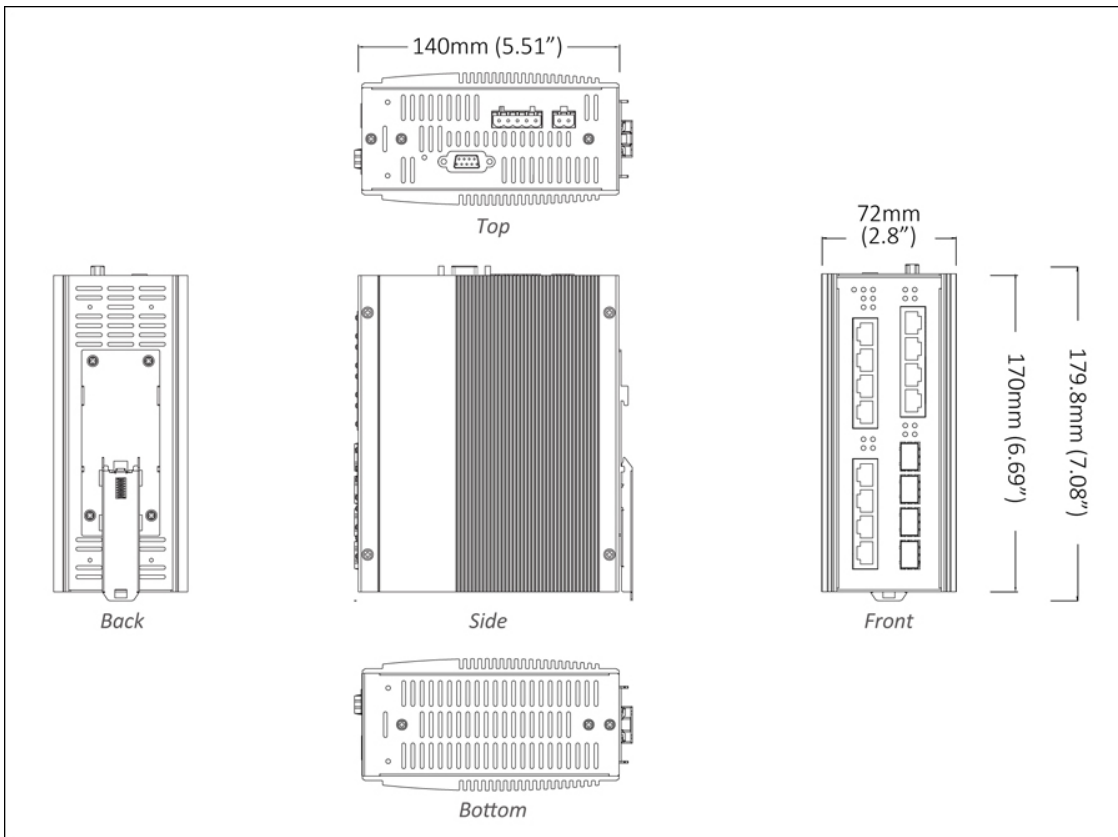
Details
www.etherwan.com/support/warranty-policy

+ What's Included

Device
Ethernet Switch

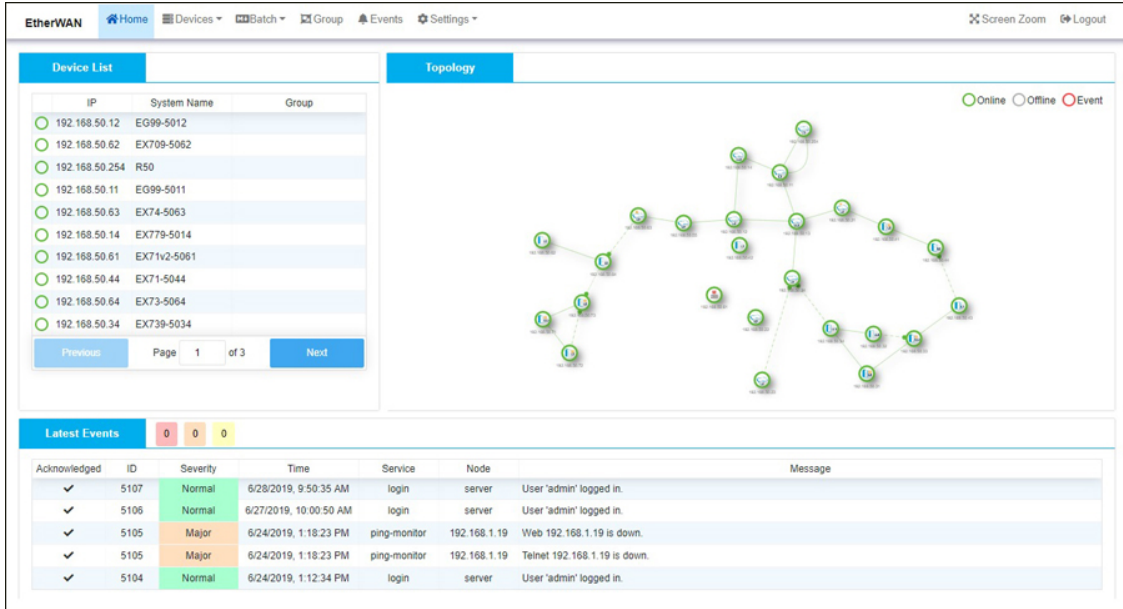
Cables

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](#)



The screenshot shows the EtherWAN management interface. It features a navigation bar at the top with options like Home, Devices, Batch, Group, Events, and Settings. The main content area is divided into two panels: 'Device List' and 'Topology'.

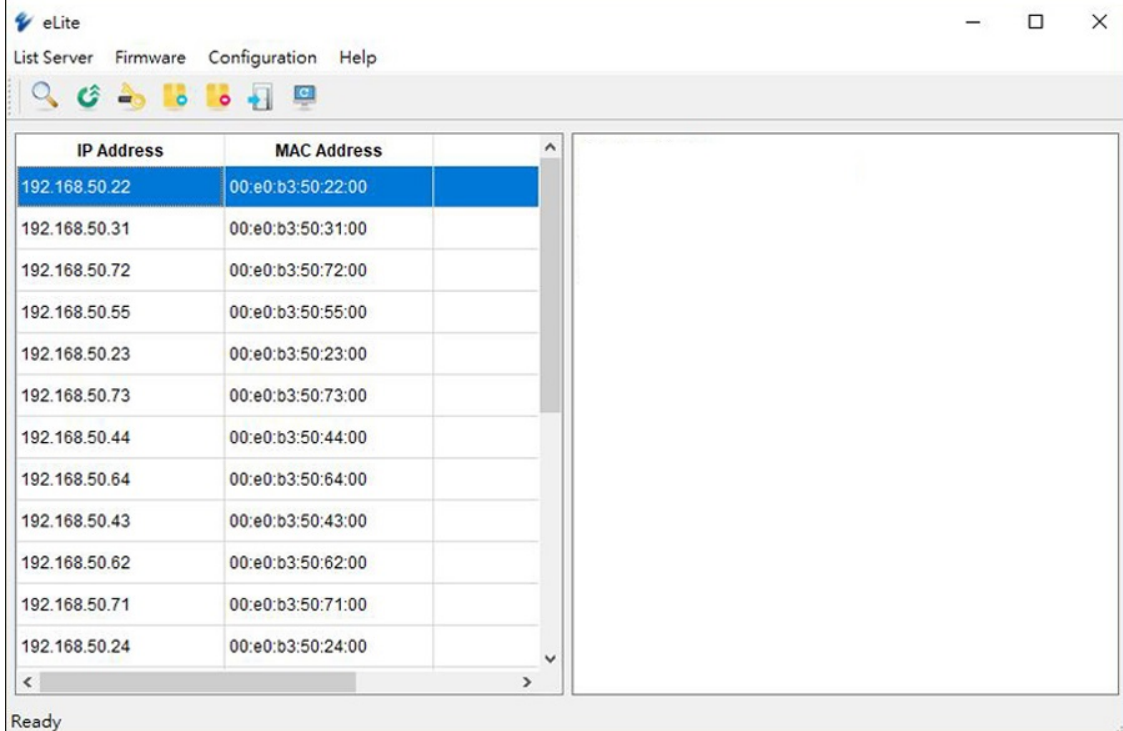
Device List:

| 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: A network diagram showing various nodes connected in a mesh-like structure. A legend indicates Online (green circle), Offline (grey circle), and Event (red circle).

Latest Events:

| 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 network discovery tool interface. It has a menu bar with 'List Server', 'Firmware', 'Configuration', and 'Help'. Below the menu is a toolbar with various icons. The main area displays a table of discovered devices.

| 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 |

The status bar at the bottom indicates '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
EX73921-0XB 8-Port 10/100/1000BASE-TX + 4-Port Gigabit Fiber

* DIN-Rail mounting kit included.

+ Gigabit Fiber Options (X)

3 1000BASE-SX (SC) - 550m
4 1000BASE-SX (SC) - 2Km
5 1000BASE-SX (ST) - 550m
A 1000BASE-LX (SC) - 10Km
B 1000BASE-LX (SC) - 20Km
R 1000BASE-BX (SC) WDM-TX: 1310nm/RX: 1550nm-20Km
S 1000BASE-BX (SC) WDM-TX: 1550nm/RX: 1310nm-20Km

* More Gigabit options are also available upon request.

+ 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 |
| EB-232 | Configuration Backup and Restoration Tool |

