

EX78900H 系列

強固級網管型 10 - 16 埠 Gigabit PoE 乙太網路交換器



產品介紹

益網科技 EX78900H 系列是強固級網管型導軌式 PoE 太網交換機平台。配備多達 12 個 90W 功率的 Gigabit PoE 連接埠，支援 IEEE 802.3bt 標準協議以及 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。

IEC 62443-4-2 認證 — 為關鍵工業與基礎設施應用打造更強大的資安韌性與營運可靠性。

益網科技 - “連結，制勝的關鍵”

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 100M/1000M SFP+ 光纖上行鏈路連接埠
全雙工運行的全容量交換

+ PoE 乙太網供電功能

IEEE 802.3bt 支援每埠最高 90W，總輸出功率達 360W
PoE 看門狗監控設備的連接狀態與自訂排程

+ 適用於不通風和惡劣環境的強固等級

-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
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

+ 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

產品特色

+ Interface

CLI, Telnet, Web GUI

+ Management

SFTP (Secured FTP) support
Configuration backup / restore
DHCP Server/Client
RMON (Remote Monitoring)
Port Mirroring
NTP (Network Time Protocol) synchronization
PoE Watchdog
LLDP (Link Layer Discovery Protocol)
IPv4/IPv6
SNMP v1/v2c/v3
Modbus TCP

+ 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

+ Security

- MAC Address filtering
- Enable/Disable port
- Storm Control and Detection
- DoS (Denial of Service) Attack
- Port Security
- 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)
- IPSG (IP Source guard)
- DAI (Dynamic ARP Inspection)
- DHCP Snooping

+ 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 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

- 32Gbps

Forwarding Rate

- 23.5Mpps

Max VLANs

- 256 (4096 VID)

Jumbo Frame Size

- 9KB

MAC Table Size

- 16K

Packet Buffer Memory

- 12M bits

產品規格

+ 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 0.5A/48VDC

LED Indicators

Per Unit: Power 1, Power 2

Per Port: Link/Activity (Green)

Per PoE Port: PoE Status (Orange)

+ 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

1,399,701 hours

+ 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

20W Max (without PoE)

PoE Power Output

Ports 1-12: Up to 90W/port

Power Budget: 360W

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

1.5kg (3.3lbs)

Installation Type

DIN-rail mounting

+ 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 802.3bt Power over Ethernet
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

+ 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)
PoE Ports: line to earth 6kV Surge
EN 61000-4-6 (Induced RFI)
EN 61000-4-8 (Magnetic field)

Safety

UL 61010

Cybersecurity

IEC 62443-4-1
IEC 62443-4-2

Traffic

NEMA TS2

Railway

EN 50121-4

Vibration

IEC 60068-2-6

Shock

IEC 60068-2-27

Free Fall

FED STD 101C Method 5007.1

+ What's Included

Device

Ethernet Switch

Cables

1 Console Cable

Installation

Mounting brackets, screws

Documentation

Quick Install Guide

+ Warranty

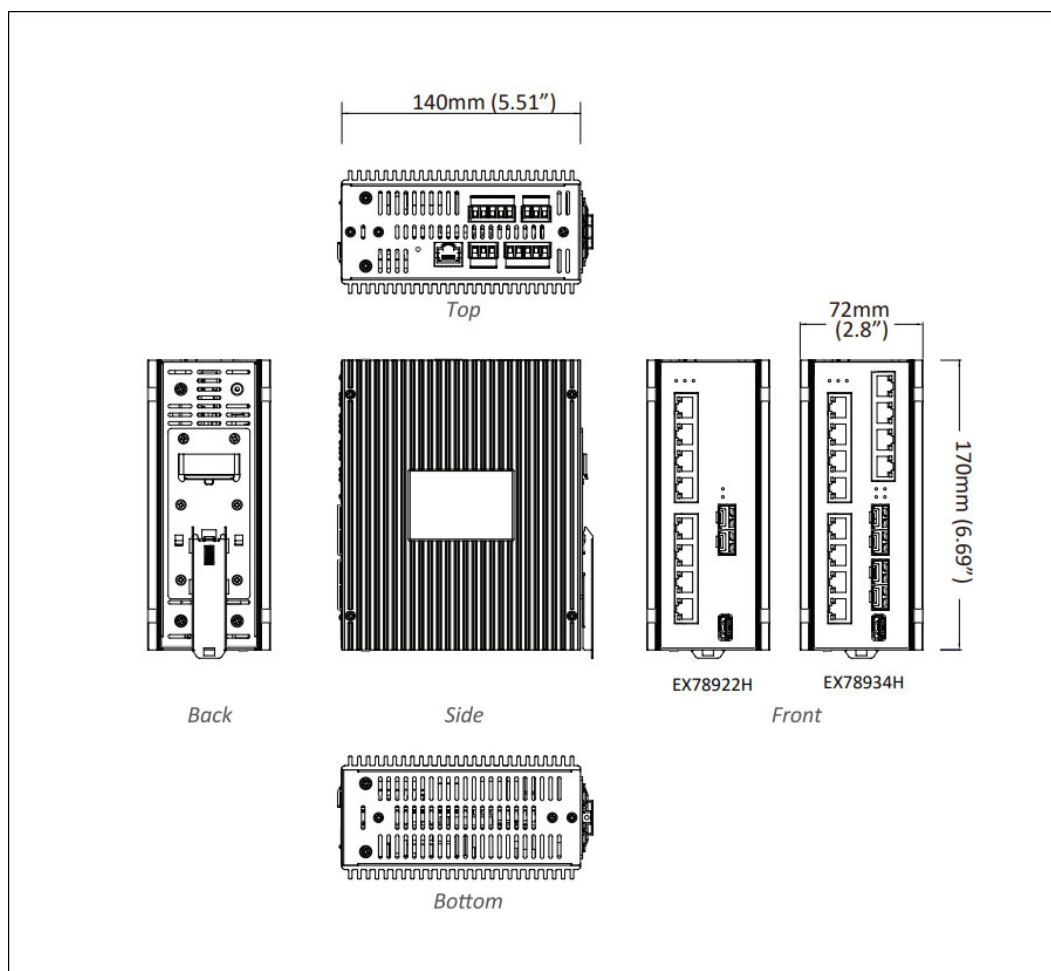
Length

Limited Lifetime

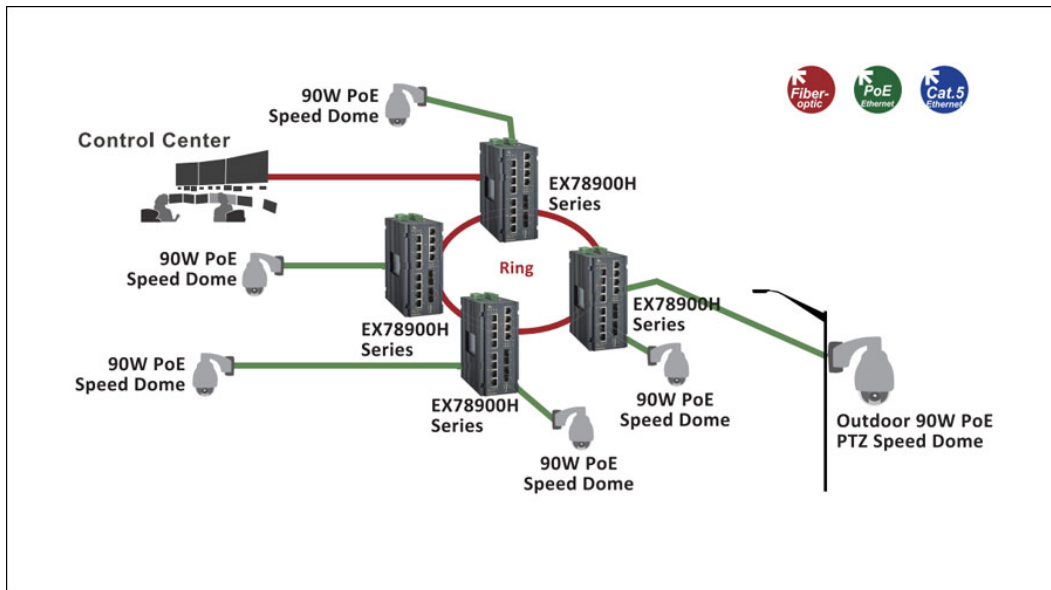
Details

www.etherwan.com/support/warranty-policy

產品尺寸圖



應用圖



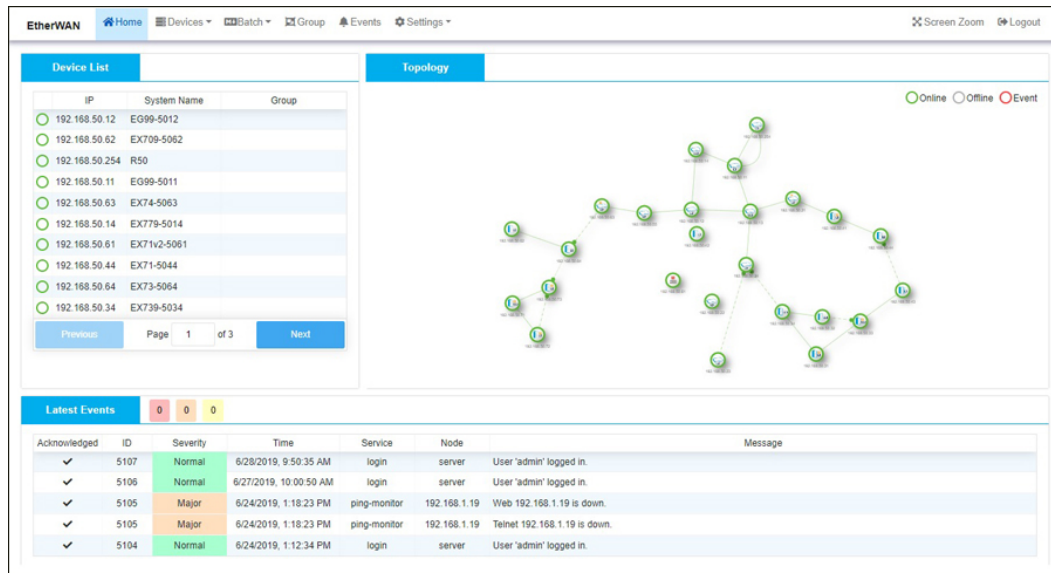
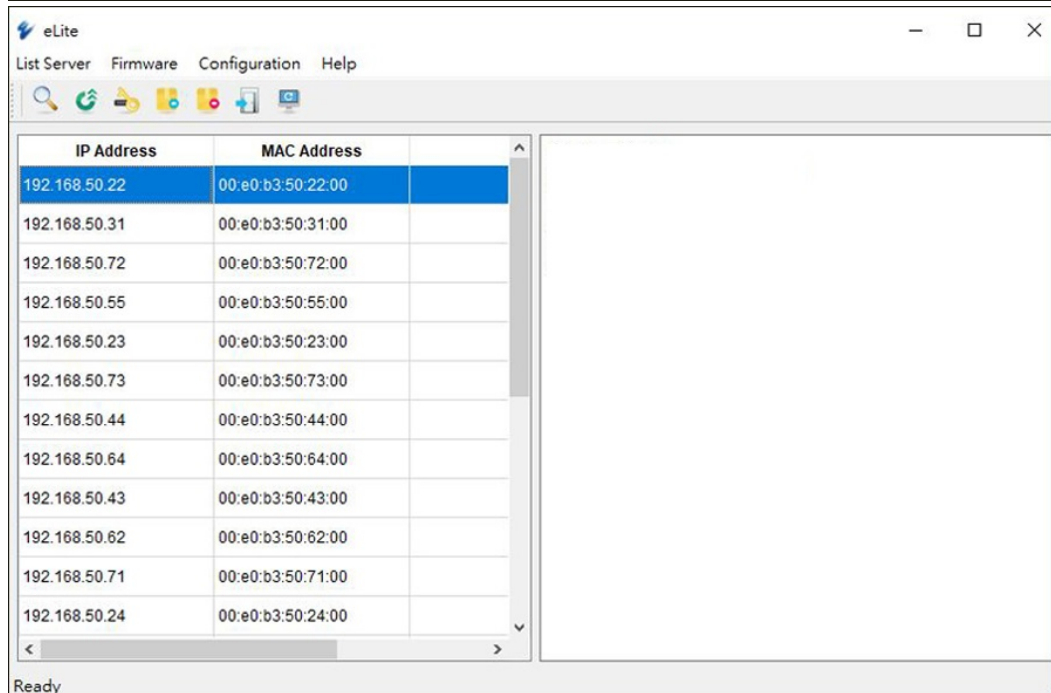
管理軟體

網路管理

[eVue™ 網絡配置和監控工具](#)

網路探索

[eLite™ 網絡偵測 IP 配置工具](#)

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


EX78934H-0VB
EX78924H-0VB
EX78922H-0VB

10/100/1000BASE TX	12	8	8
100/1000 BASE SFP	4	4	2
PoE per port	最高支援90W		
	訂購諮詢	訂購諮詢	訂購諮詢

+ Accessories

Hardened 100BASE SFP Modules	www.etherwan.com/products/sfp-fiber-transceiver
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	NDR-480-48 480W 48VDC DIN-Rail Power Supply

