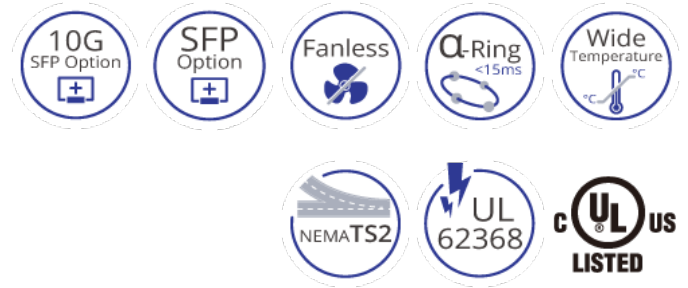


EX77964

Lite Layer 3 強固級網管型 24 埠 Gigabit + 4 埠 1G/10G SFP 乙太網路交換器



產品介紹

益網科技 EX77964 系列，為一款強固等級設計、Full-Gigabit 並結合 Layer 3 路由協定功能的乙太交換器。支援靜態路由、路由信息協議 (RIP) V1/V2 和虛擬路由備援協定 (VRRP)，確保資訊傳輸的高安全性及最佳的成本效益。

EX77964 系列可依需求挑選 28 個 Gigabit 埠，或 24 個網路埠搭配 4 個 10G SFP+ 等多種組合，254mm 深度之特殊短機殼設計，適合安裝於小型機箱內。完整的管理功能和組合，支援 Port Security, IGMP Snooping, Port-based VLAN, GARP 協定, Link Aggregation 及 ACL, 網路瀏覽介面, Telnet, SSH, SNMP, RMON, TFTP, 和 RS-232 管理介面。強固等級設計，可於 -40 到 75°C 之寬溫環境下穩定運作。

EtherWAN — "When Connectivity is Crucial."

產品亮點

+ 適用於不通風和惡劣環境的強固等級

-40 至 75°C (-40 至 167°F) 寬工作溫度範圍
無風扇設計
高耐溫衝擊和高雜訊抗噪

+ 具高頻寬靈活性

最高可串接 24 個 10/100/1000BASE-T(X) RJ45 連接埠，用於乙太網路的銅線連接
最高可串接 8 個雙速率 100/1000BASE SFP 連接埠，用於多組光纖連接
4 個 1G/10G SFP+ 連接埠，用於連接到核心與集線核心層

+ 簡配第 3 層網路功能

支援 Static routing、RIP v1/v2 和 OSPF
VRRP 備援機制
減少廣播性封包的流量

+ 保固服務

提供免費技術支援
提供免費韌體升級服務
有限終身保固

產品特色

+ Interface

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

+ Management

Firmware upgrade
Configuration backup via TFTP
DHCP Server/Client
RMON (Remote Monitoring)
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
ACL (Access Control List)

+ 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
EtherWAN's Alpha-Ring network fault recovery (<15ms) and Alpha-Chain

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

16 or 24 x 10/100/1000BASE-T(X)

8 x 100/1000BASE SFP

4 x 10G SFP+

Console

1 x RJ45 RS-232

Config Backup

1 x USB (Type A Connector)

Alarm Contact

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

LED Indicators

Per Unit: Power

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

14,881,000pps for 10Gbps

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

12-24VDC Redundant (Terminal block)

Power Consumption

31.08W

+ Physical

Casing Material
Metal

IP Rating
IP30

Dimensions
430 x 254 x 44.2mm (W x D x H)
16.9" x 10" x 1.74"

Weight
3.29Kg (7.25lbs)

Installation Type
Rack 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 62368

Vibration
IEC 60068-2-6 Fc

Shock
IEC 60068-2-27 Ea

Free Fall
FED STD 101C Method 5007.1

Industrial Compliance
NEMA TS2

+ Warranty

Length
Limited Lifetime

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

+ What's Included

Device
Ethernet Switch

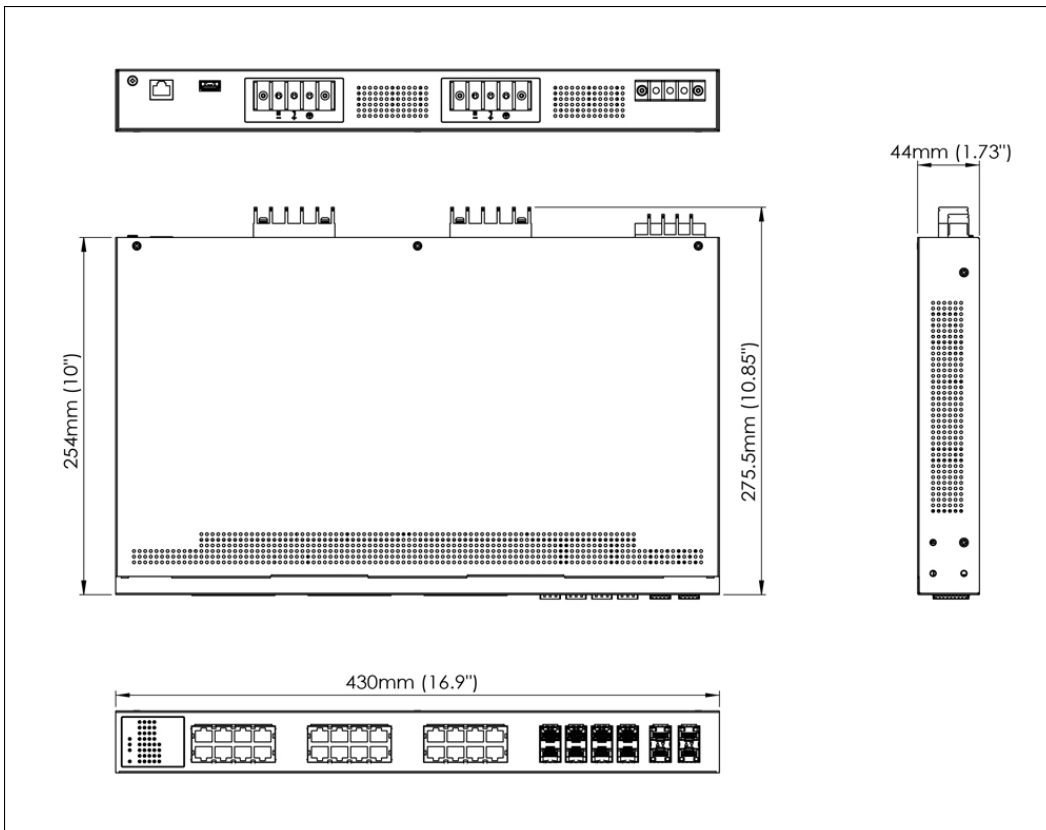
Cables
1 Console Cable

Installation

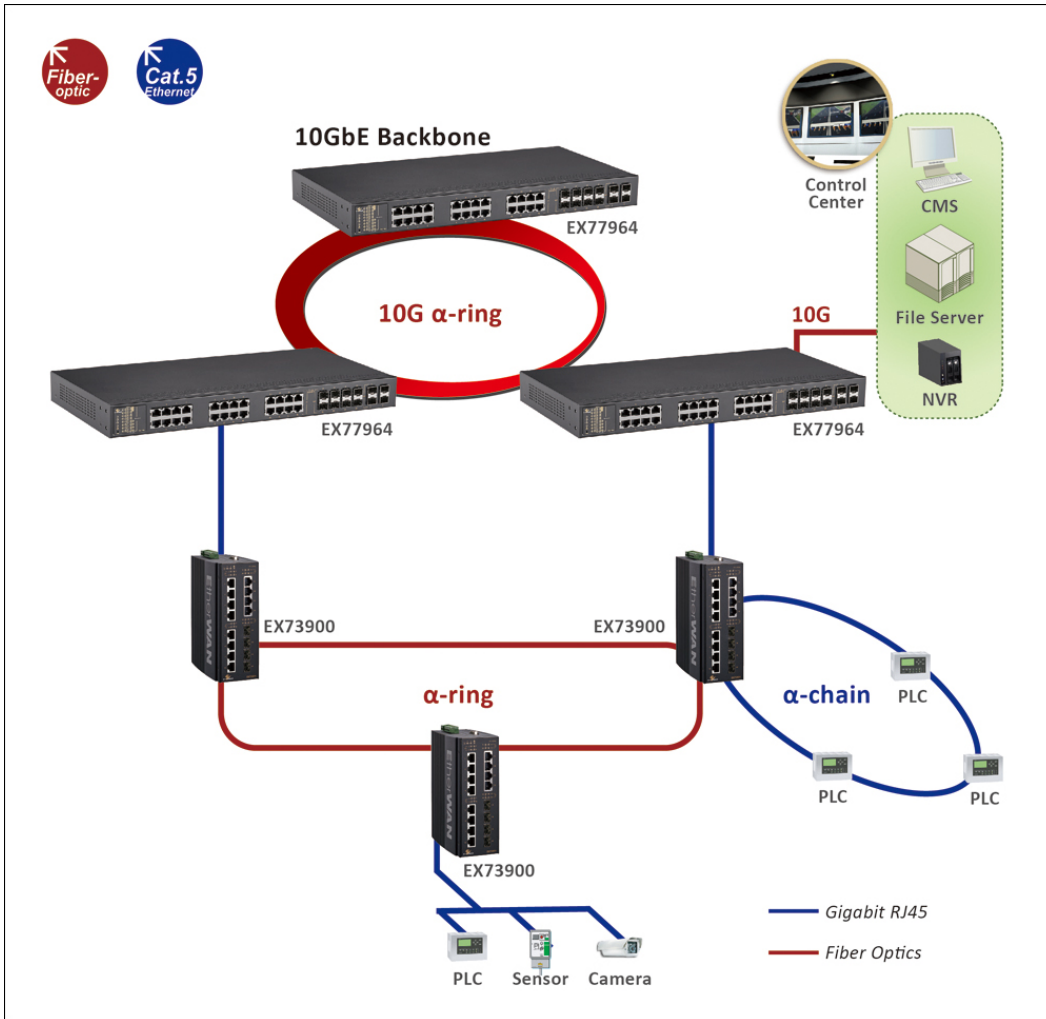
Mounting brackets

Documentation
Quick Install Guide

產品尺寸圖

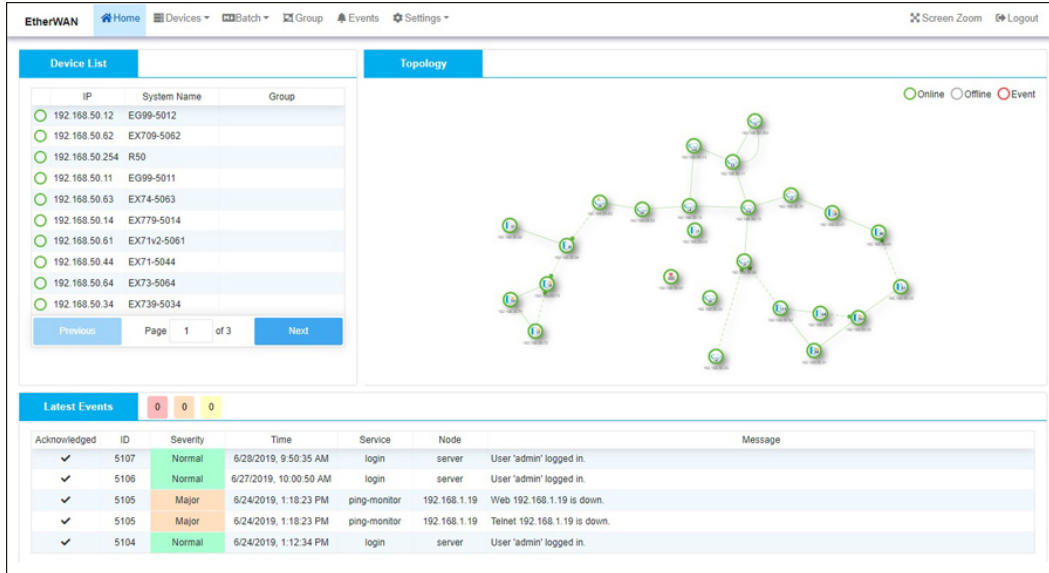


產品應用圖



管理軟體

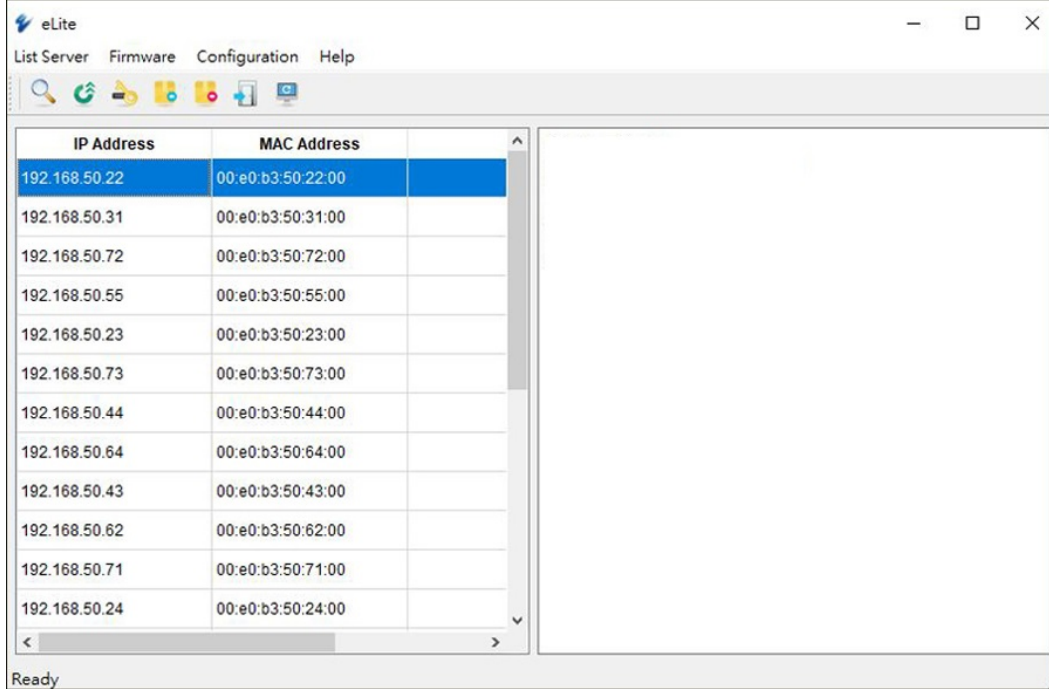
Network Management [eVue™ Network Configuration and Monitoring Tool](#)
 Network Discovery [eLite™ Network Discovery and IP Configuration Tool](#)



The screenshot shows the EtherWAN 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

EX77964-8VB 16-port 10/100/1000BASE-TX + 8-port 100/1000BASE SFP Combo + 4-port 1G/10G SFP+ (12-24VDC)

+ Accessories

Hardened 100BASE SFP Modules	www.etherwan.com/products/sfp-fiber-transceiver
Hardened Gigabit and 10-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 EB-232	HDR-60-24 60W 24VDC DIN-Rail Power Supply Configuration Backup and Restoration Tool

