

EX77000 系列

強固級網管型 24 埠10/100BASE + 4 埠 Gigabit 乙太網路交換器 (SFP 選擇組合)



產品亮點

+ 多元彈性介面組合

24個10/100base-TX/FX/BX/SFP加4埠Gigabit，光纖埠-SX/LX/BX/SFP

+ KEMA認證

通過KEMA、IEC 61850-3和IEEE 1613標準測試

+ 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
金屬外殼設計，可有效避免高溫及高濕度環境導致材質老化
高衝擊、耐熱和電氣干擾抵抗力

產品介紹

EX77000系列配備24個10/100BASE乙太網路連接埠及四個Gigabit光纖埠(可彈性搭配固定式光纖或SFP光纖插槽)，支援益網獨家技術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，小於15毫秒內快速恢復連線通訊。本系列乙太網路交換器同時支援Redundant Pair協定，可將不同的備援環狀網路串接在一起，大幅延伸備援機制架構，最高可同時支援235個環狀網路，在50毫秒內回復網路連線。

EX77000系列具備完整管理功能，包含port security、IGMP snooping、VLANs、GARP 協定、LACP；使用者可透過網頁瀏覽telnet、SNMP、RMON、TFTP和RS-232 console管理介面，使複雜的專案規劃事半功倍。EX77000系列專為嚴峻戶外環境設計打造，工業等級設計，可在高EMI環境及-40 到 75°C 寬溫環境下穩定運作。

EtherWAN — "When Connectivity is Crucial."

產品特色

+ Interface

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

+ Management

Firmware and configuration upgrade and backup via TFTP
Supports DHCP Server/Client
RMON (Remote Monitoring)
Port mirroring: TX/RX and both
NTP (Network Time Protocol) time 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
System log (Remote/Local)
Multi-level user account/password against unauthorized configuration

+ Quality of Service (QoS)

Priority Queues: 4 queues per port
Traffic classification based on IEEE 802.1p CoS, DSCP, 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 Protocol

IEEE 802.1D Spanning Tree Protocol (STP)
IEEE 802.1w Rapid Spanning Tree Protocol (RSTP)
IEEE 802.1s Multiple Spanning Tree Protocol (MSTP)
EtherWAN's Alpha-Ring network fault recovery (<15ms) and Alpha-Chain

VLANs

Port-based VLANs
IEEE 802.1Q Tag VLANs (128 groups, 4096 VID)
GVRP (GARP VLAN Registration Protocol)
GMRP (GARP Multicast Registration Protocol)

Link Aggregation

Static Trunk (8 groups, support MAC base)
IEEE 802.3ad Link Aggregation Control Protocol

IGMP Snooping

IGMP Snooping v1/v2/v3

+ Performance

Switching Capability: 12.8Gbps
Jumbo Frame: 9K bytes

產品規格

+ 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 Port-based Network Access Control

Forward and 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

Power input can be configured as:

- (T): ±48VDC Internal Universal PSU
- (W): 88-300VDC or 100-240VAC Internal Universal PSU
- (C): 100-240VAC, 50-60Hz Internal Universal PSU

Power Consumption

For models with all copper ports: EX77604 Series:

21.9W@230VAC

For models with all fiber ports: EX77064 Series:

40.6W@230VAC

+ Mechanical

Casing

Metal Case
IP30

Dimensions

Redundant Power:442 x 375 x 44mm (W x D x H)

(17.4" x 14.7" x 1.73")
 Single Power: 442 x 250 x 44.2mm (W x D x H)
 (17.4" x 9.8" x 1.74")

Weight
 5Kg (11lbs.)

Installation
 Rack mounting

+ Interface

Ethernet Port

10/100BASE-TX: 0, 8, 16 or 24 ports
 100BASE-FX: 0, 8, 16 or 24 ports
 Gigabit: 4 ports

Console Port

One DB9 RS-232 port

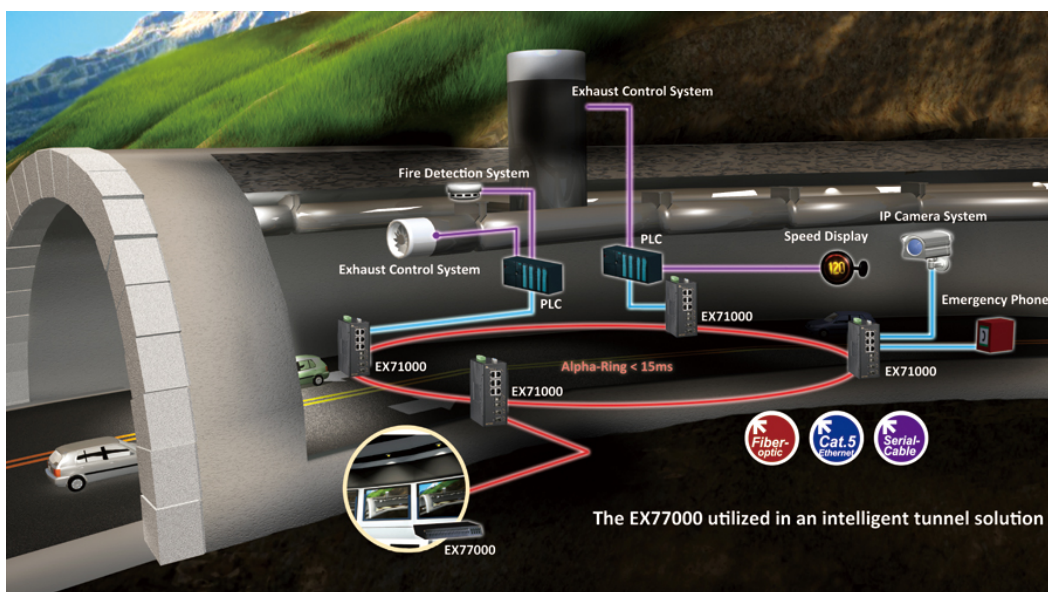
Alarm Contact

One relay output with current 0.6A/30VDC

LED Indicators

Per Unit: Power, Alarm
 Per Port: Link/Activity (Green)
 Per SFP Slot: Selected (Green)

產品應用圖



F)
 0 to 185°F)

F)
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ls

9001 facility

EMI

- FCC Part 15B Class A
- EN 61000-6-4

EMS

- EN 61000-6-2
- EN 61000-4-2 (ESD Standards)
- EN 61000-4-3 (Radiated RFI Standards)
- EN 61000-4-4 (Burst Standards)
- EN 61000-4-5 (Surge Standards)
- EN 61000-4-6 (Induced RFI Standards)
- EN 61000-4-8 (Magnetic Field Standards)

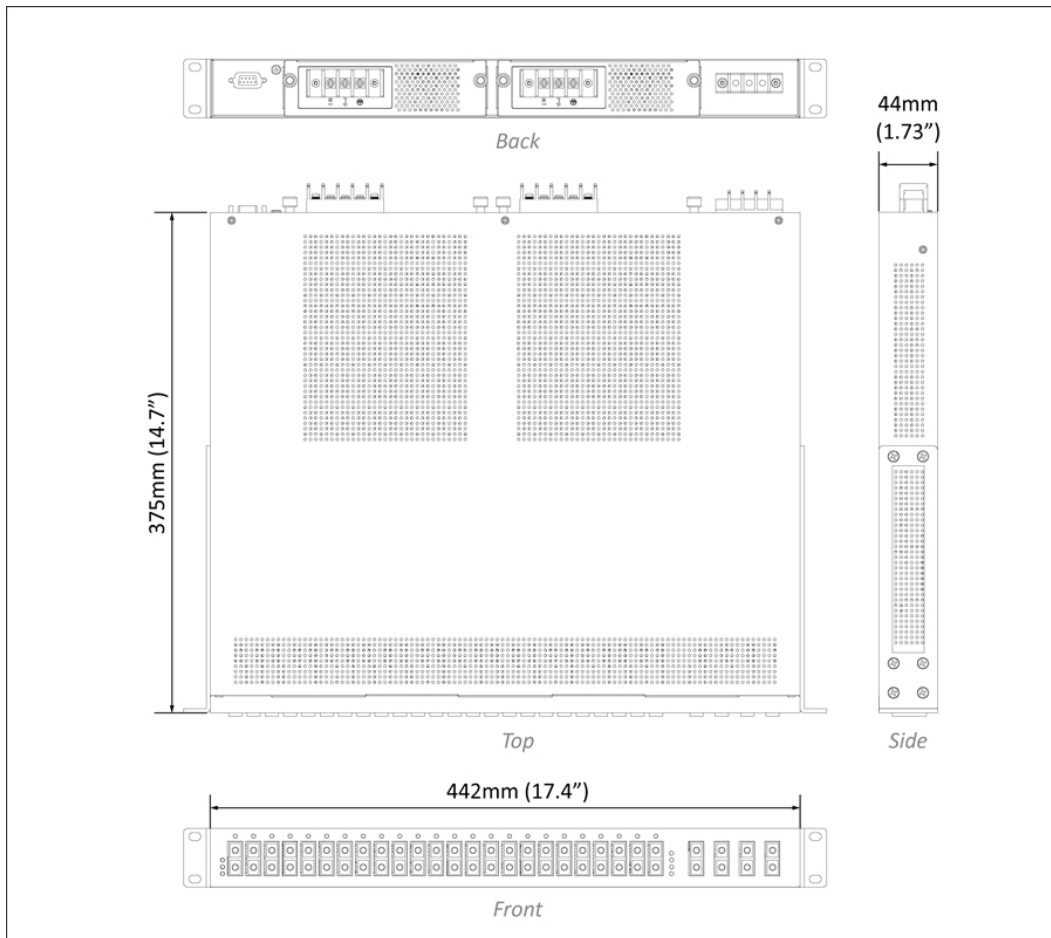
Environmental Test Compliance

- IEC 60068-2-6 Fc (Vibration Resistance)
- IEC 60068-2-27 Ea (Shock)
- FED STD 101C Method 5007.1 (Free fall w/package)

Industrial Compliance

- NEMA TS2

產品尺寸圖



訂購型號

型號

| | |
|--------------|--|
| EX77604-0XYZ | 24-port 10/100BASE-TX +4-port Gigabit Managed Ethernet Switch |
| EX77424-WXYZ | 16-port 10/100BASE-TX +8-port 100BASE-FX +4-port Gigabit Managed Ethernet Switch |
| EX77244-WXYZ | 8-port 10/100BASE-TX +16-port 100BASE-FX +4-port Gigabit Managed Ethernet Switch |
| EX77064-WXYZ | 24-port 100BASE-FX +4-port Gigabit Managed Ethernet Switch |
| EX77064-V0VZ | 24-port 100BASE-SFP +4-port Gigabit SFP Combo Managed Ethernet Switch |

* Rack mounting kit included.

100FX Fiber Options (W)

| | |
|---|---|
| 1 | Multi Mode (SC) - 2Km |
| 2 | Multi Mode (ST) - 2Km |
| A | Single Mode (SC) - 20Km |
| H | Single Mode (ST) - 20Km |
| P | Single Mode (SC) WDM-TX: 1310nm/RX: 1550nm-20Km |
| Q | Single Mode (SC) WDM-TX: 1550nm/RX: 1310nm-20Km |
| V | SFP |

Numbers of fixed Gigabit Fiber (X)

| | |
|---|--------------------------|
| 0 | None |
| 4 | Four Gigabit Fiber Ports |

Gigabit Port Options (Y)

| | |
|---|-------------------------|
| 3 | 1000BASE-SX (SC) - 550m |
| 4 | 1000BASE-SX (SC) - 2Km |
| 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 |
| V | 4-port 100/1000BASE SFP Combo with 10/100/1000BASE-TX |

Power Input Interface (Z)

| | |
|-----------|--|
| T | ±48VDC (Terminal Block) |
| W | 88-300VDC or 100-240VAC (Terminal Block) |
| C | 100-240VAC (AC Inlet) |
| TR | ±48VDC Redundant (Terminal Block) |
| WR | 88-300VDC or 100-240VAC Redundant (Terminal Block) |
| CR | 100-240VAC Redundant (AC Inlet) |

