

## EX78162 系列

強固級網管型 16埠10/100BASE PoE + 2埠Gigabit 乙太網路交換器



### 產品介紹

本產品自2020年5月15日起停產。請點選 [此處](#) 尋找替代產品。

EX78162系列強固乙太網路交換器，採鋁軌式安裝，提供16個10/100BASE PoE連接埠及兩個Gigabit LC光纖埠。IEEE 802.3at PoE網路埠，每埠最高可支援30W，總供電瓦數為240W，可廣泛應用於許多終端受電(PD)設備，例如PTZ 球型攝影機、無線基地台及軌旁通訊設備等。

透過益網獨家技術Alpha-Ring環狀網路備援機制，可在網路斷線時迅速啟動備援機制，於15毫秒內恢復連線通訊。

EX78162系列具備完整管理功能，包含port security, IGMP snooping, port-based VLAN, GARP 協定, link aggregation；使用者可透過網頁瀏覽, telnet, SSH, SNMP, RMON, TFTP,和RS-232 console 管理介面，執行各種等級的網路管理。

EX78162系列專為嚴峻戶外環境設計打造，工業等級設計，可承受強力的落摔衝擊、防震動及抗電磁波干擾，更可在 -40 到 75°C 寬溫環境下穩定運作。

EtherWAN — "When Connectivity is Crucial."

## 產品亮點

### PoE連接埠

- » 1-16埠支援IEEE 802.3at /af PoE供電標準

### 強固等級設計

- » 寬溫操作(-40 到75°C)
- » 無風扇和堅固的金屬外殼設計，可有效避免高溫及高濕度環境導致材質老化
- » 抗震動及抗電磁波干擾

### 智慧化管理功能

- » 完整的網路管理效能：QoS, VLAN,ACL和支援RADIUS

## 產品特色

### Management

- » Interface
    - CLI, Telnet and Web Browser
    - SNMP v1/v2c/v3
  - » Firmware and configuration upgrade and backup via TFTP
  - » Supports DHCP Server/Client
  - » RMON (Remote monitoring): group 1, 2, 3, 9
  - » Port mirroring: TX/RX and both
  - » SFP transceivers support Digital Diagnostics Monitoring (DDM)
  - » NTP (Network Time Protocol) time synchronization
  - » IEEE 802.1ab LLDP (Link Layer Discovery Protocol)
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### Security

- » MAC address filtering
  - » Enable/disable port
  - » Storm control (broadcast and multicast types)
  - » IEEE 802.1x LAN access control
  - » Remote authentication through RADIUS
  - » SSH for CLI and Telnet security
  - » SSL for web security
  - » Multi-level user account/password against unauthorized configuration
  - » System log (remote/local)
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### 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)
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### 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 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)
- » 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 (2 groups, support MAC base)
  - IEEE 802.3ad Link Aggregation Control Protocol
- » IGMP Snooping
  - IGMP snooping v1/v2/v3
- » Performance
  - Switching Capability: 7.2Gbps
  - Packet Buffer Size: 2M
  - MAC Address Table: 8K

## 產品規格

### 技術

#### 標準

- 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
- IEEE 802.3af/at Power over Ethernet (PoE)

#### Forward and Filtering Rate

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

#### 緩衝記憶體封包

- 2M bits

#### 傳輸型式

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

#### MAC地址表

- 8192 MAC addresses
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### 電源

#### 輸入電壓

- Redundant power inputs  
Terminal Block: 52–57VDC

## 電力功耗

- Device: Max. 15W (without PoE)
- PoE Power Budget (depends on power input): 240W Max.

## PoE Technology

- Alternative B  
Pins 7/8(-), 4/5(+)

## PoE Power Output

- Port 1 to 16 support PoE
- IEEE 802.3af: up to 15.4W/port, 47-57VDC
- IEEE 802.3at: up to 30W/port, 52-57VDC

## Protection

- Reverse polarity protection
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## 機構

### 機殼

- 金屬材質
- IP30

### 尺寸

- 71.4 x 140 x 170mm (W x D x H)  
(2.85" x 5.6" x 6.8")

### 重量

- 1.44 Kg (3.17lbs.)

### 安裝方式

- DIN-Rail
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## 介面

### 乙太網路埠

- 10/100BASE-TX (PoE): 16 ports
- Gigabit SFP: 2 ports

### Console Port

- Port: One DB9 RS-232 port

### Alarm Contact

- One relay output with current 1A/250VAC

### LED 指示燈號

- Per Unit: Power
  - Per Port: Link/Activity (Green)
  - Per PoE Port: PoE (Orange)
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## 環境

### 工作溫度

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

### 儲存溫度

- -45 to 85°C (-49 to 185°F)

### 工作濕度

- 5% to 95% (無凝結)
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## 通過認證

### ISO

- Manufactured in an ISO 9001 facility

### EMI

FCC Part 15B Class A

EN 61000-3-2

EN 61000-3-3

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)

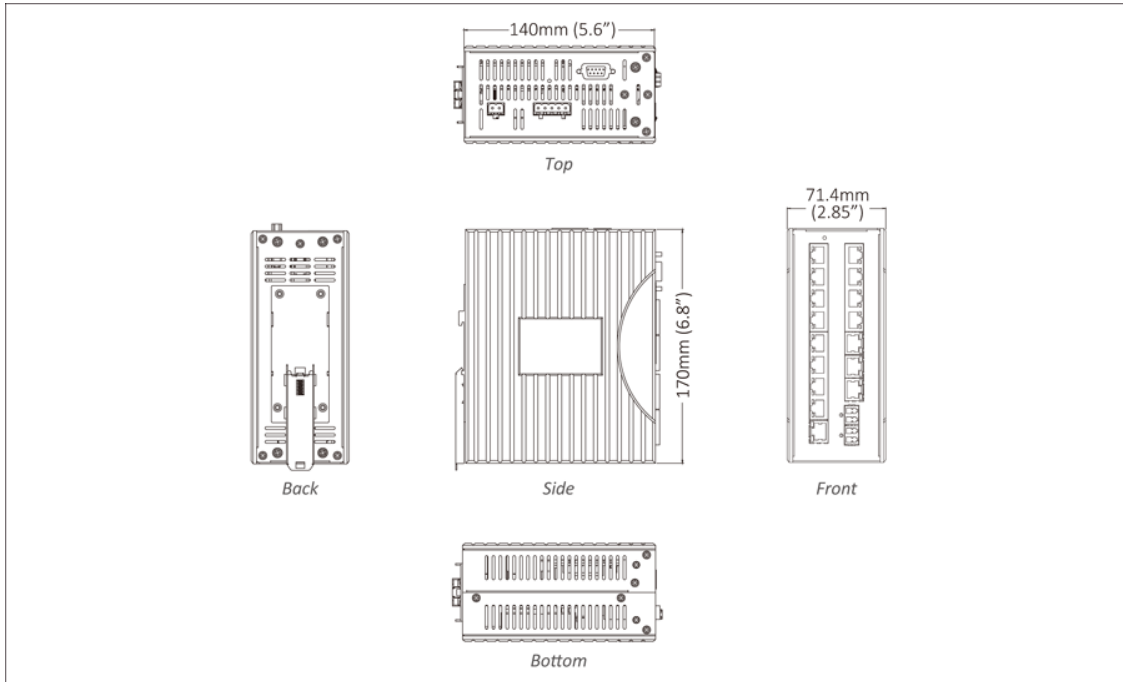
### Environmental Test Compliance

IEC 60068-2-6 Fc (Vibration)

IEC 60068-2-27 Ea (Shock)

IEC 60068-2-32 Ed (Free fall)

## 產品尺寸圖



## 訂購型號

### 型號

<b>EX78162-0VB</b>	16-port 10/100BASE-TX PoE +2-port Gigabit SFP Hardened Managed Ethernet Switch
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\* DIN-Rail mounting kit included.

### Optional Accessories

<b>SDR-480-48</b>	480W/10A DIN-Rail 48VDC Industrial Power Supply
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