

## EX70900 系列

IEC 61850-3/IEEE 1613 強固級網管型8埠Gigabit乙太網路交換器



### 產品介紹

**本產品自 2020年5月26日起停產。請點選 [此處](#) 尋找替代產品。**

EX70900系列為一款full Gigabit網管型乙太網路交換器，內建6個10/100/1000BASE-TX+2個SFP埠。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。

EX70900系列專為嚴峻戶外環境設計打造，鋁軌式安裝設計、工業等級設計且符合IEC 61850標準，同時可在高EMI環境及-40 到 75°C 寬溫環境下穩定運作，於嚴峻的專案規劃佈局中扮演致勝的關鍵角色。

EtherWAN — "When Connectivity is Crucial."

## 產品亮點

### Full Gigabit連接埠

- » 提供8個Gigabit埠，支援多元介面組合：copper、SC、ST或 LC

### 智慧化管理功能

- » 完整的網路管理效能：QoS, VLAN

### 通過IEC 61850-3/IEEE 1613標準

- » 符合電廠認證標準，可應用於高EMI環境架構

### 符合Energy Efficient Ethernet (EEE)

- » 符合IEEE 802.3az標準

## 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)
  - » 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
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## Performance

- » Switching Capability: 16Gbps
  - » Packet Buffer Size: 1.5M bits
  - » MAC Address Table: 4K
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## 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 802.3az EEE
- 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

#### 緩衝記憶體封包

- 1.5M bits

#### 傳輸型式

- Store-and-Forward
- Half-duplex back-pressure and IEEE 802.3x full-duplex flow control

#### 巨大封包

- 9720 bytes

#### MAC地址表

- 4096 MAC addresses
- 

### 電源

#### 輸入電壓

- Redundant power inputs:  
12-48VDC (Terminal Block)

12VDC (DC Jack)

### 電力功耗

- 10.2W Max., 0.85A@12VDC

### Protection

- Reverse polarity protection
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## 機構

### 機殼

- Aluminum Case
- IP30

### 尺寸

- 66 x 125 x 145mm (W x D x H)  
(2.64" x 4.92" x 5.7")

### 重量

- 1.1Kg (2.42lbs.)

### 安裝方式

- DIN-Rail (Top hat type35mm) or Wall mounting
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## 介面

### 乙太網路埠

- 10/100/1000BASE-TX: 8, 7, or 6 ports
- 1000BASE-SX/LX/SFP: 0, 1, or 2 ports

### Console Port

- Port: One DB9 RS-232 port

### LED 指示燈號

- Per Unit: Power Status (Power 1, Power 2, Power 3), Alarm
- Per Port: Link/Activity

### Alarm Contact

- One relay output with current 1A@24VDC
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## 環境

### 工作溫度

- -40 to 75°C (14 to 167°F)

Tested @ -40 to 85°C (-40 to 185°F)

### 儲存溫度

- -40 to 85°C (-40 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

### Safety

UL 508

### EMI

FCC Part 15B Class A

EN 61000-6-4

EN 61000-3-2

EN 61000-3-3

### 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)

FED STD 101C Method 5007.1 (Free fall w/package)

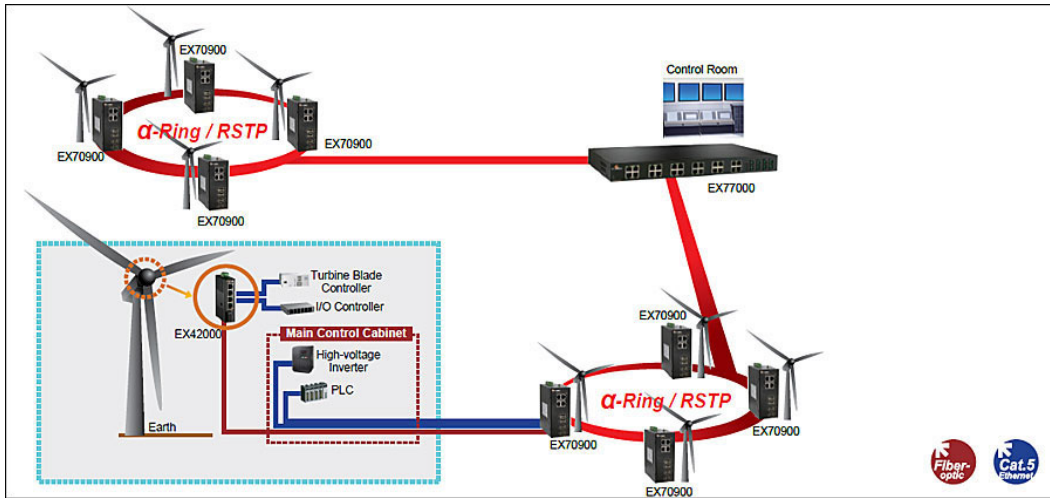
### Industrial Compliance

IEC 61850-3/IEEE 1613

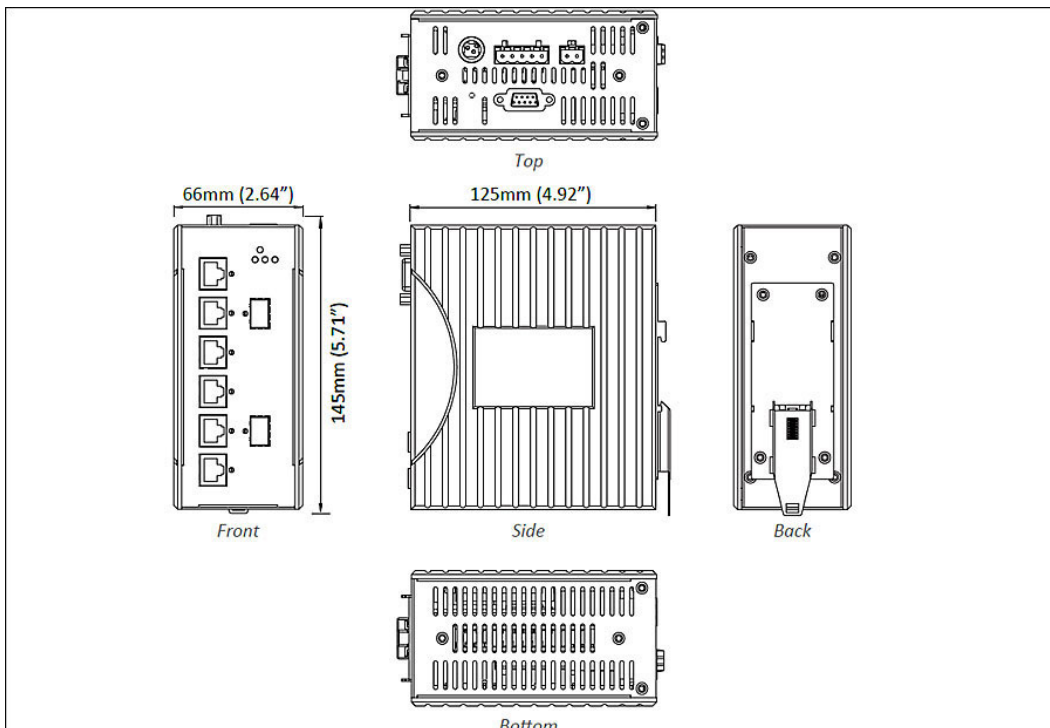
EN 50121-4

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## 產品應用圖



## 產品尺寸圖





## 訂購型號

### 型號

|                    |  |
|--------------------|--|
| <b>EX70980-00B</b> | 8-Port 10/100/1000BASE-TX Managed Hardened Ethernet Switch                       |
| <b>EX70971-0VB</b> | 7-Port 10/100/1000BASE-TX +1-Port Gigabit SFP Hardened Managed Ethernet Switch   |
| <b>EX70962-0VB</b> | 6-Port 10/100/1000BASE-TX +2-Port Gigabit SFP Hardened Managed Ethernet Switch   |
| <b>EX70962-0XB</b> | 6-Port 10/100/1000BASE-TX +2-Port Gigabit Fiber Hardened Managed Ethernet Switch |

\* DIN-Rail mounting kit included.

### Gigabit Port Options (X)

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

\* More Gigabit options are also available upon request.

### Optional Accessories

|                      |   |
|----------------------|---|
| <b>HDR-30-24</b>     | 30W/1.5A DIN-Rail 24VDC Industrial Power Supply   |
| <b>HDR-60-24</b>     | 60W/2.5A DIN-Rail 24VDC Industrial Power Supply   |
| <b>EX41-145046-X</b> | Power Supply 45W 12VDC with Open Wire<br>(X) = 1: US, 2: EU, 3: UK, 4: AU, 5: JP, 6: SA |
| <b>EX41-145044-X</b> | Power Supply 45W 12VDC with Latch<br>(X) = 1: US, 2: EU, 3: UK, 4: AU, 5: JP, 6: SA     |



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