

## EX83000 系列

IEC 61850/IEEE 1613 強固級網管型 16埠10/100BASE +2埠Gigabit combo 乙太網路交換器



### 產品介紹

**本產品自2019年6月30日起停產。請點選 [此處](#) 尋找替代產品。**

EX83000系列為網管型鋁軌式安裝設計機型，具備16個10/100BASE乙太網路連接埠及2個Gigabit光纖埠(可彈性搭配固定式光纖或SFP combo光纖插槽)。

具備完整管理功能，包含port security、IGMP snooping、VLANs、GARP 協定、LACP和GOOSE；使用者可透過網頁瀏覽telnet、SNMP、RMON、TFTP和RS-232 console 管理介面，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15毫秒內便可快速恢復連線通訊。

EX83000系列為工業等級設計交換器，符合IEC 61850 & IEEE 1613標準，同可在高EMI環境及-40 到 75°C 寬溫環境下穩定運作。

EtherWAN — "When Connectivity is Crucial."

## 產品亮點

### 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
- » 通過電廠認證IEC 61850-3 & IEEE 1613標準

### 多元彈性介面組合

- » 支援16個10/100base-TX/FX/BX/SFP加2埠Gigabit SX/LX/BX/SFP

## 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
  - » 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
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## Performance

- » Switching Capability: 7.2Gbps
  - » Packet Buffer Size: 2M bits
  - » MAC Address Table: 8192
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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 802.3z 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

- 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

- 12-48VDC (Terminal Block)
- 12VDC (DC Jack)

#### 電力功耗

- 15W Max. 1.25A@12VDC, 0.625A@24VDC

## Protection

- Reverse polarity protection
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## 機構

### 機殼

- Aluminum Case
- IP30

### 尺寸

- 84 x 125 x 145mm (W x D x H)  
(3.3" x 4.92" x 5.71")

### 重量

- 1.4Kg (3.08lbs.)

### 安裝方式

- DIN-Rail (Top hat type 35mm) or Wall mounting
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## 介面

### 乙太網路埠

- 10/100BASE-TX: 16, 12 or 8 ports
- 100BASE-FX: 0, 1, 2 or 4 ports
- Gigabit: 0, 1 or 2 ports

### Console Port

- Port: One DB9 RS-232 port

### LED 指示燈號

- Per Unit: Power 1, Power 2, Power 3
- Per Port: Link/Activity (Green: Copper, Orange: Fiber)

### Alarm Contact

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

### 工作溫度

- -40 to 75°C (-40 to 167°F)

Tested @ -40 to 80°C (-40 to 176°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 61000-6-4

EN 55022

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)
- IEC 61000-4-10 (Oscillatory wave magnetic field test)
- IEC 61000-4-16 (Power frequency immunity test)
- IEC 61000-4-18 (Oscillatory wave immunity test)

### Environmental Test Compliance

IEC 60068-2-27 Ea (Shock)

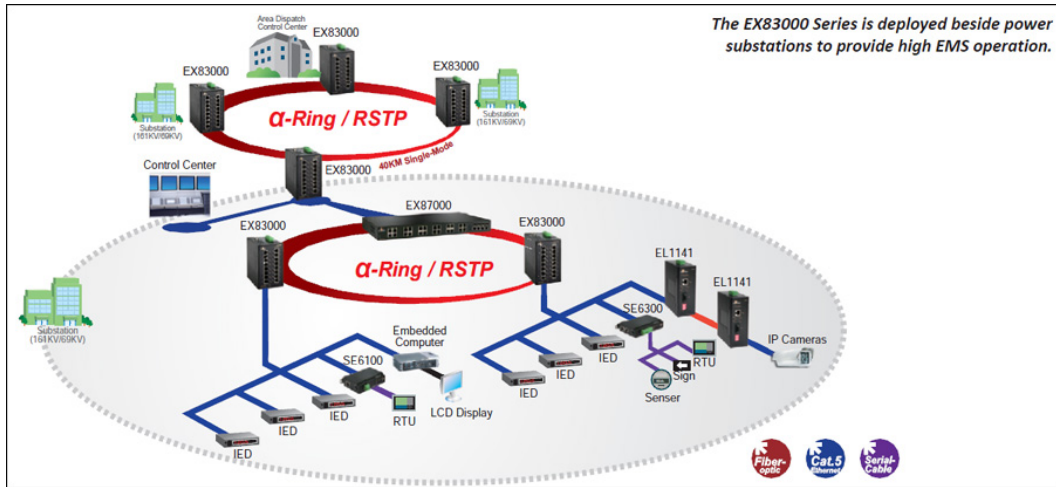
FED STD 101C Method 5007.1 (Free fall w/package)

### Industrial Compliance

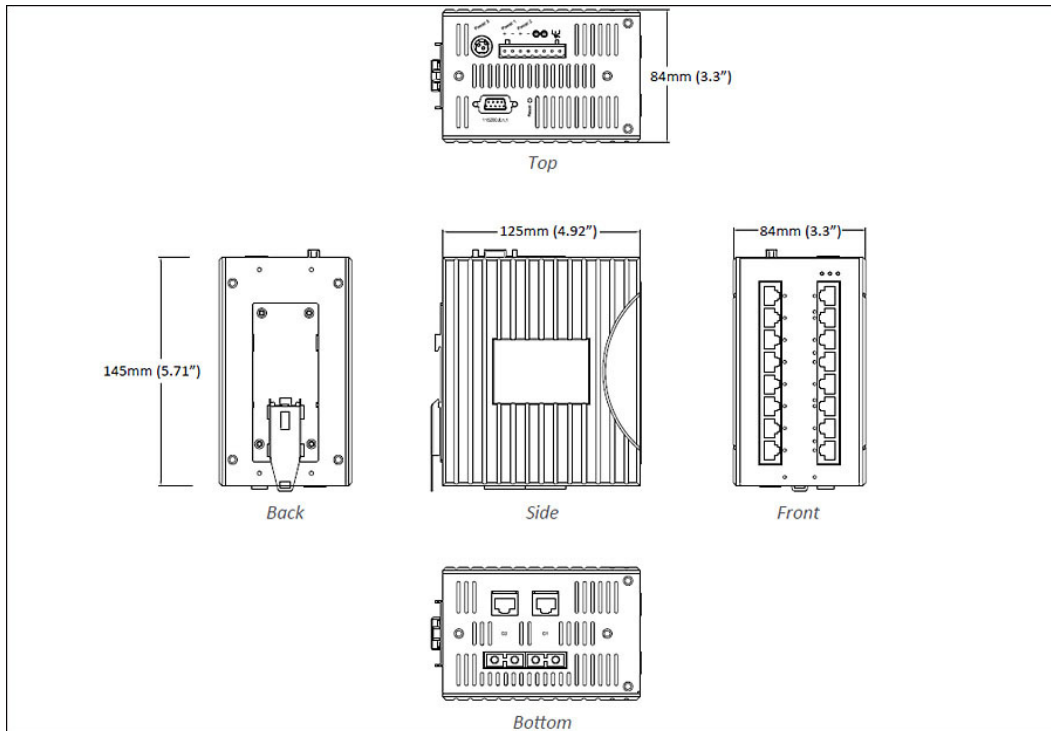
IEEE 61850-3/IEEE 1613

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## 產品應用圖



## 產品尺寸圖





## 訂購型號

### 型號

EX83400-00B	16-port 10/100BASE-TX Hardened Managed Ethernet Switch
EX83402-0YB	16-port 10/100BASE-TX +2-port Gigabit Hardened Managed Ethernet Switch
EX83322-XYB	12-port 10/100BASE-TX +2-port 100BASE-FX +2-port Gigabit Hardened Managed Ethernet Switch
EX83200-00B	8-port 10/100BASE-TX Hardened Managed Ethernet Switch
EX83202-0YB	8-port 10/100BASE-TX +2-port Gigabit Hardened Managed Ethernet Switch
EX83240-X0B	8-port 10/100BASE-TX +4-port 100BASE-FX Hardened Managed Ethernet Switch
EX83242-XYB	8-port 10/100BASE-TX +4-port 100BASE-FX +2-port Gigabit Hardened Managed Ethernet Switch

\* DIN-Rail mounting kit included.

### 100FX Fiber Options (X)

1	Multi Mode (SC) - 2Km
2	Multi Mode (ST) - 2Km
6	Multi Mode (SC) WDM-TX: 1310nm/RX: 1550nm-2Km
7	Multi Mode (SC) WDM-TX: 1550nm/RX: 1310nm-2Km
8	Multi Mode (SC) WDM-TX: 1310nm/RX: 1550nm-5Km
9	Multi Mode (SC) WDM-TX: 1550nm/RX: 1310nm-5Km
A	Single Mode (SC) - 20Km
B	Single Mode (SC) - 40Km
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
R	Single Mode (SC) WDM-TX: 1310nm/RX: 1550nm-40Km
S	Single Mode (SC) WDM-TX: 1550nm/RX: 1310nm-40Km

V	100BASE SFP
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## Gigabit Port Options (Y)

1	10/100/1000BASE-TX (No Gigabit Fiber port supported)
3	Combo port: 10/100/1000BASE-TX with 1000BASE-SX (SC) - 550m
4	Combo port: 10/100/1000BASE-TX with 1000BASE-SX (SC) - 2Km
5	Combo port: 10/100/1000BASE-TX with 1000BASE-SX (ST) - 550m
A	Combo port: 10/100/1000BASE-TX with 1000BASE-LX (SC) - 10Km
B	Combo port: 10/100/1000BASE-TX with 1000BASE-LX (SC) - 20Km
R	Combo port: 10/100/1000BASE-TX with 1000BASE-BX (SC) WDM-TX: 1310nm/RX: 1550nm-20Km
S	Combo port: 10/100/1000BASE-TX with 1000BASE-BX (SC) WDM-TX: 1550nm/RX: 1310nm-20Km
V	Combo port: 1000BASE-SFP with 10/100/1000BASE-TX

## Optional Accessories

KP-AA96-480	Panel mounting Kits
HDR-30-24	30W/1.5A DIN-Rail 24VDC Industrial Power Supply
HDR-60-24	60W/2.5A DIN-Rail 24VDC Industrial Power Supply
EX41-145046-X	Power Supply 45W 12VDC with Open Wire (X)= 1: US, 2: EU, 3: UK, 4: AU, 5: JP, 6: SA
EX41-145044-X	Power Supply 45W 12VDC with Latch (X)= 1: US, 2: EU, 3: UK, 4: AU, 5: JP, 6: SA

