

## EX83304 系列

IEC 61850-3/IEEE 1613 Lite L3 12埠10/100BASE-TX +4埠Gigabit 強固級網管型 乙太網路交換器



## 產品介紹

EX83304 系列是一款專為嚴峻戶外環境打造的強固級乙太網路交換器，提供高達 12 個 10/100BASE-TX + 4 個 Gigabit SFP 埠。它搭配益網獨家技術 Alpha-Ring 環狀網路備援機制，可以在網路發生斷線時迅速啟動備援機制，並於 15 毫秒內恢復連線。此外，它還具備完整的管理功能，包括 Port Security、IGMP Snooping、VLANs、GARP 協定、Link Aggregation 和 ACL，使用者可以透過網頁瀏覽 Telnet、SSH、SNMP、RMON、TFTP 和 RS-232 Console 管理介面。

EX83304 系列支援多種功能，例如 MSTP、QoS、靜態路由和 RIP 路由協定等，可以實現更靈活和可靠的網路路由，控制網路流量，提高網路效能和安全性。此外，它符合 IEC 61850 & IEEE 1613 標準，可以在高 EMI 環境及 -40 到 75°C 寬溫環境下穩定運作，支援 IPv6，讓使用者可以適應未來網路的發展趨勢。

EtherWAN — "When Connectivity is Crucial."

## 產品亮點

### + 高頻寬彈性配置

8 或 12 個 10/100TX 高速連接埠  
多達 4 個 Gigabit 光纖上行鏈路連接埠  
全雙工運行的全容量交換

### + 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  
高衝擊、耐熱和電氣干擾抵抗力

### + 簡配第 3 層網管功能

靜態路由、RIP v1/v2, 和 OSPF  
VRRP 虛擬路由器備援協定  
廣播流量減輕

### + 認證規範

IEC 61850-3 / IEEE 1613 變電站認證  
NEMA TS2 規範  
UL 安全認證

### + 管理/安全功能

連接埠控制  
支援 RADIUS 優化網路安全機制  
使用 eVue™ 和 eLite™ 設定和監控

### + 服務支援

提供技術支援  
免費韌體升級和通知  
有限終身保固

## 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)

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

System log (Remote/Local)

ACL

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 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

#### VLANs

IEEE 802.1Q Tag VLANs (128 groups, 4096 VID)

GVRP (GARP VLAN Registration Protocol)

GMRP (GARP Multicast Registration Protocol)

#### Link Aggregation

Static Trunk (4 groups, support MAC base)

IEEE 802.3ad Link Aggregation Control Protocol

#### IGMP Snooping

IGMP Snooping v1/v2/v3

### + Layer 3 Features

#### IP Packet Routing

Maximum number of routes in hardware: 64 entries

OSPF

RIP v1/v2

Static routing

#### Routing Redundancy

VRRP

## 產品規格

### + Technology

#### Standards

IEEE 802.3 10BASE-T  
IEEE 802.3u 100BASE-TX/100BASE-FX  
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

### + Interface

#### Ethernet Port

10/100BASE-TX: 8 or 12 ports  
Gigabit SFP: 2/4 ports

#### Console Port

Port: One DB9 RS-232 port

#### Alarm Contact

One relay output with current 0.6A/30VDC

#### LED Indicators

Per Unit: Power 1, Power 2  
Per Port: Link/Activity (Green)

### + Environment

#### Operating Temperature

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

#### Storage Temperature

-45 to 85°C (-49 to 185°F)

#### Ambient Relative Humidity

5% to 95% (non-condensing)

## + Power

### Input

Redundant power inputs: Terminal Block: 12-48VDC

### Power Consumption

17.28W Max. 1.44A@12VDC, 0.67A@24VDC

### Protection

Reverse polarity protection

## + Mechanical

### Casing

Aluminum Case

IP30

### Dimensions

72 x 140 x 170mm (W x D x H) (2.8" x 5.5" x 6.7")

### Weight

1.4Kg (3.09lbs.)

### Installation

DIN-Rail

## + Regulatory Approvals

### ISO

Manufactured in an ISO 9001 facility

### Safety

UL 61010

### 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 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)

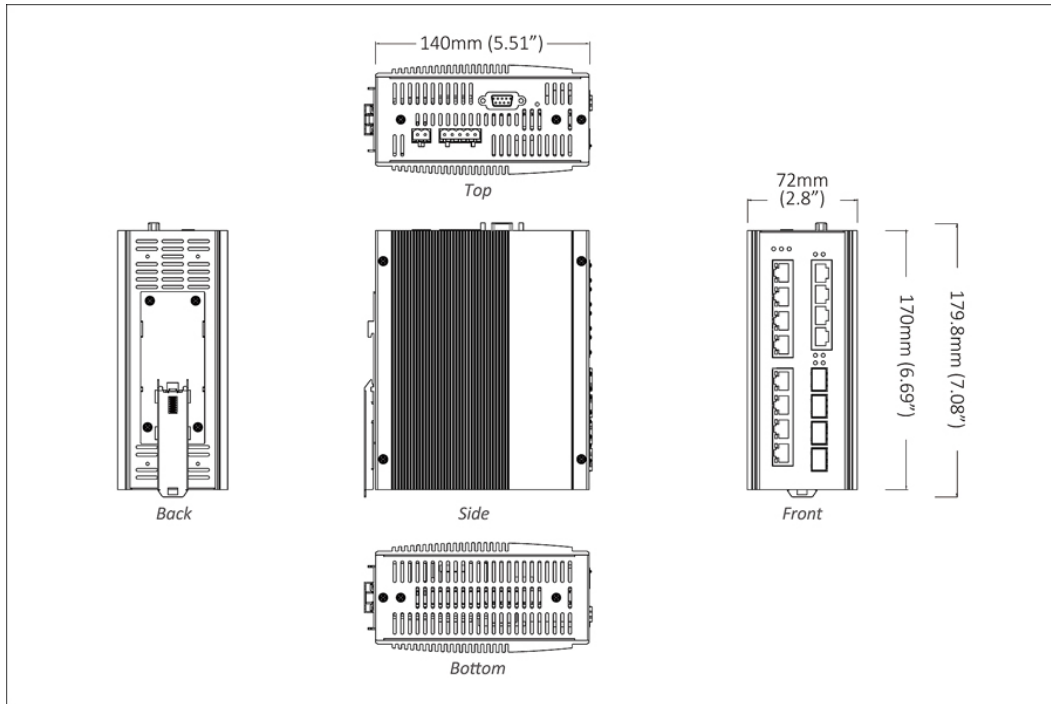
FED STD 101C Method 5007.1 (Free fall w/package)

### Industrial Compliance

IEEE 61850-3/IEEE 1613

NEMA TS2

## 產品尺寸圖



## 訂購型號

### + Model

<b>EX83304-0VB</b>	12-Port 10/100BASE-TX +4-port Gigabit SFP Hardened Managed Ethernet Switch
<b>EX83204-0VB</b>	8-Port 10/100BASE-TX +4-Port Gigabit SFP Hardened Managed Ethernet Switch
<b>EX83202-0VB</b>	8-Port 10/100BASE-TX +2-Port Gigabit SFP Hardened Managed Ethernet Switch

\* DIN-Rail mounting kit included.

### + 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>EDR-75-24</b>	75W/3.2A DIN-Rail 24VDC Industrial Power Supply
<b>EB-232</b>	Configuration Backup and Restoration Tool for EX83304 switch with firmware 2.02.2 or above

