EX83000 Series

IEC 61850/IEEE 1613 Hardened Managed 8 to 16-port 10/100BASE with 2-port Gigabit combo Ethernet Switch



Overview

This product is discontinued as of 30th June 2019.click here for alternative product.

EtherWAN's EX83000 Series provides a Hardened Fully Managed 18-port switching platform combining high performance switching backbone with robust and secure management features required for mission critical and harsh environments where sustained connectivity is crucial.

The EX83000 Series is equipped with Sixteen 10/100BASE Fast Ethernet ports, in combination with up to Two Gigabit, Fixed Fiber, or SFP Combo port options. Mountable on a DIN-rail. The EX83000 Series is equipped with EtherWAN's Alpha-Ring self-healing technology, providing less than 15ms fault recovery time making it ideal for applications intolerant to interruption.

Users are able to access management features such as port security, IGMP snooping, VLANs, GARP protocols, LACP, and GOOSE messaging to name a few, via web browser, Telnet, SNMP, RMON, TFTP, and RS-232 console interfaces. With its hardened-grade specifications and IEC61850 & IEEE1613 certifications, the EX83000 Series is capable of operating under high EMI environments at the temperatures ranging from -40 to 75°C, making it an ideal choice for harsh applications.

EtherWAN — "When Connectivity is Crucial."

Spotlight

Hardened Grade

» Wide operating temperature range from -40 to 75°C (-40 to 167°F) for extreme environments
» Fanless and ruggedized housing
» High shock and electric noise immunity
» IEC61850/IEEE1613 compliant for applications in power substation zones

Versatile Connectivity

» Provides 16-port 10/100BASE-TX/FX/BX/SFP plus 2-port Gigabit-SX/LX/BX/SFP combo

Features

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
» IEEE802.1ab LLDP (Link Layer Discovery Protocol)

Security

» MAC address filtering
» Enable/disable port
» Storm control (broadcast and multicast types)
» IEEE802.1x 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)

Quality of Service (QoS)

» Priority Queues: 4 queues per port
» Traffic classification based on IEEE802.1p 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
  • IEEE802.3x full duplex mode
  • Back-Pressure half duplex mode
» Redundant Protocol
  • IEEE802.1D Spanning Tree Protocol (STP)
  • IEEE802.1w Rapid Spanning Tree Protocol (RSTP)
  • IEEE802.1s Multiple Spanning Tree Protocol (MSTP)
  • EtherWAN's Alpha-Ring network fault recovery (<15ms)
» VLANs
  • Port-based VLANs
  • IEEE802.1Q 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)
  • IEEE802.3ad Link Aggregation Control Protocol
» IGMP Snooping
  • IGMP snooping v1/v2/v3

Performance

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

Specifications

Technology

Standards

- IEEE802.3, 10BASE-T
- IEEE802.3u 100BASE-TX/100BASE-FX
- IEEE802.3ab 1000BASE-T
- IEEE802.3z 1000BASE-SX/1000BASE-LX
- IEEE802.3x Full duplex and flow control
- IEEE802.1p QoS
- IEEE802.1Q Tag VLANs
- IEEE802.1w RSTP
- IEEE802.1x 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

2M bits

Processing Type

- Store-and-Forward
- Auto Negotiation
- Half-duplex back-pressure and IEEE802.3x full-duplex flow control
- Auto MDI/MDIX

Address Table Size

- 8192 MAC addresses

Power

Input Voltage

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

Power Consumption

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

Protection

• Reverse polarity protection

Mechanical

Casing

• Aluminum Case
• IP30

Dimensions

• 84 x 125 x145mm (W x D x H)
(3.3" x 4.92" x 5.71")

Weight

• 1.4Kg (3.08lbs.)

Installation

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

Interface

Ethernet Port

• 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 Indicators

• 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

Environment

Operating Temperature

• -40 to 75°C (-40 to 167°F)
Tested @ -40 to 80°C (-40 to 176°F)

Storage Temperature

• -45 to 85°C (-49 to 185°F)

Ambient Relative Humidity

• 5% to 95% (non-condensing)

Regulatory Approvals

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)

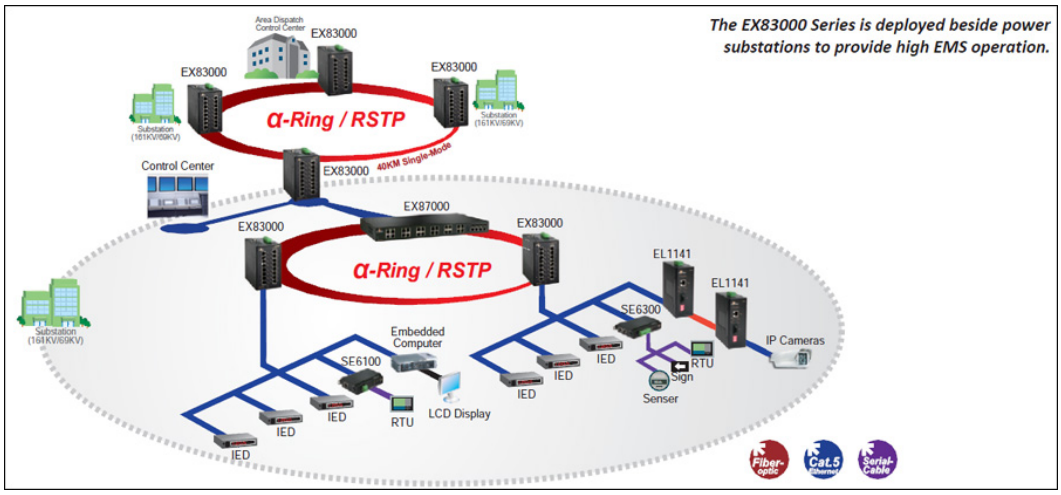
Environmental Test Compliance

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

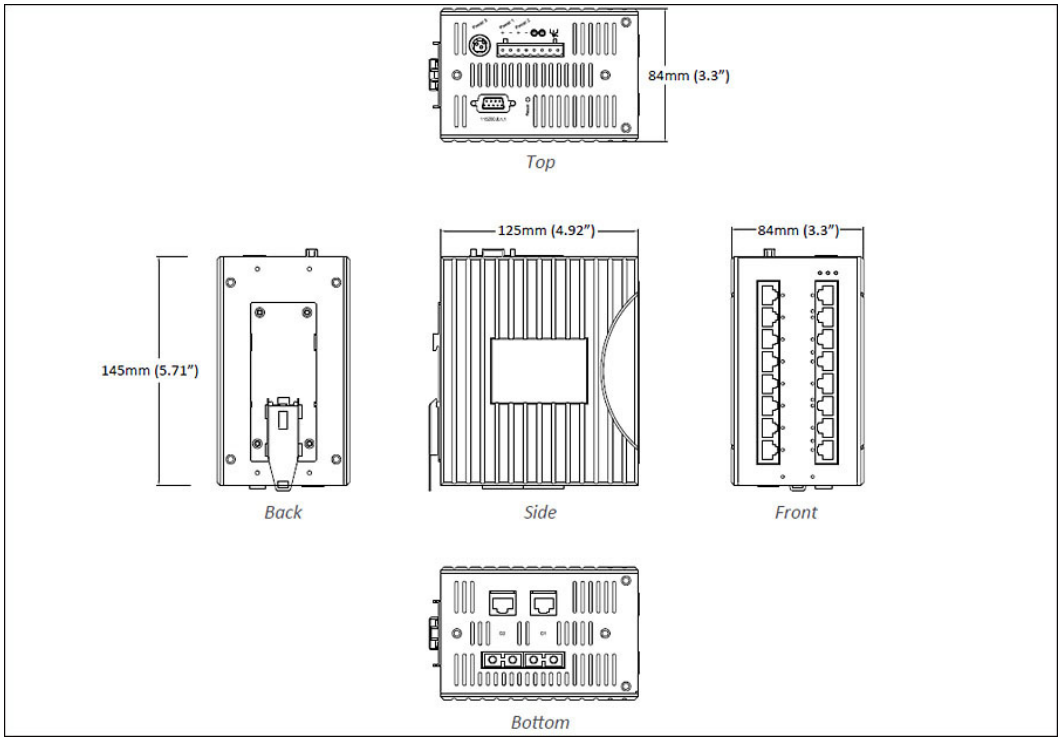
Industrial Compliance

IEEE61850-3 / IEEE1613

Application



Dimensions



Ordering Info

Model

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

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

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