

EX83304 Series

IEC 61850-3/IEEE 1613 Lite L3 Hardened Managed
12-port 10/100BASE and 4-Port Gigabit Ethernet Switch



Overview

EtherWAN's EX83304 Series is a hardened DIN-Rail mounted 16-port managed 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 EX83304 Series is equipped with maximum 12 x 10/100BASE-TX, in combination with 4 Gigabit SFP ports. The EX83304 Series is equipped with EtherWAN's Alpha-Ring self-healing technology, providing outstanding fault recovery time, making it ideal for applications intolerant to interruption. Users are able to access management features such as port security, IGMP snooping, port-based VLAN, GARP protocols, link aggregation and ACL, via web browser, telnet, SSH, SNMP, RMON, TFTP, and RS-232 console interfaces.

With the hardened specifications, the EX83304 Series is designed to operate at -40 to 75°C in harsh environments, and is IEC 61850 & IEEE 1613 certified, capable of operating under high EMI environments, making it an ideal choice for harsh applications.

EtherWAN — "When Connectivity is Crucial."

Spotlight

• Versatile Connectivity

- Provides flexibility 8 or 12 10/100BASE-T(X) ports and 2 or 4 Gigabit SFP ports

• Intelligent Management

- Optimize network performance with QoS, VLAN, ACL and RADIUS support
- Unique Dying Gasp feature provides immediate notification of switch power off with SNMP

• Lite Layer 3 Routing Features

- Supports OSPF, RIP v1/v2, static route
- Maximum number of routes in hardware: 64 entries
- Supports Virtual Router Redundancy Protocol (VRRP)

Software 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
- 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
- SSH for CLI and Telnet security
- SSL for web security
- System log (Remote/Local)
- ACL
- Multi-level user accounts and passwords

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

Hardware Specifications

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

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

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

- -40 to 85°C (-40 to 185°F)

Ambient Relative Humidity

- 5% to 95% (non-condensing)

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)

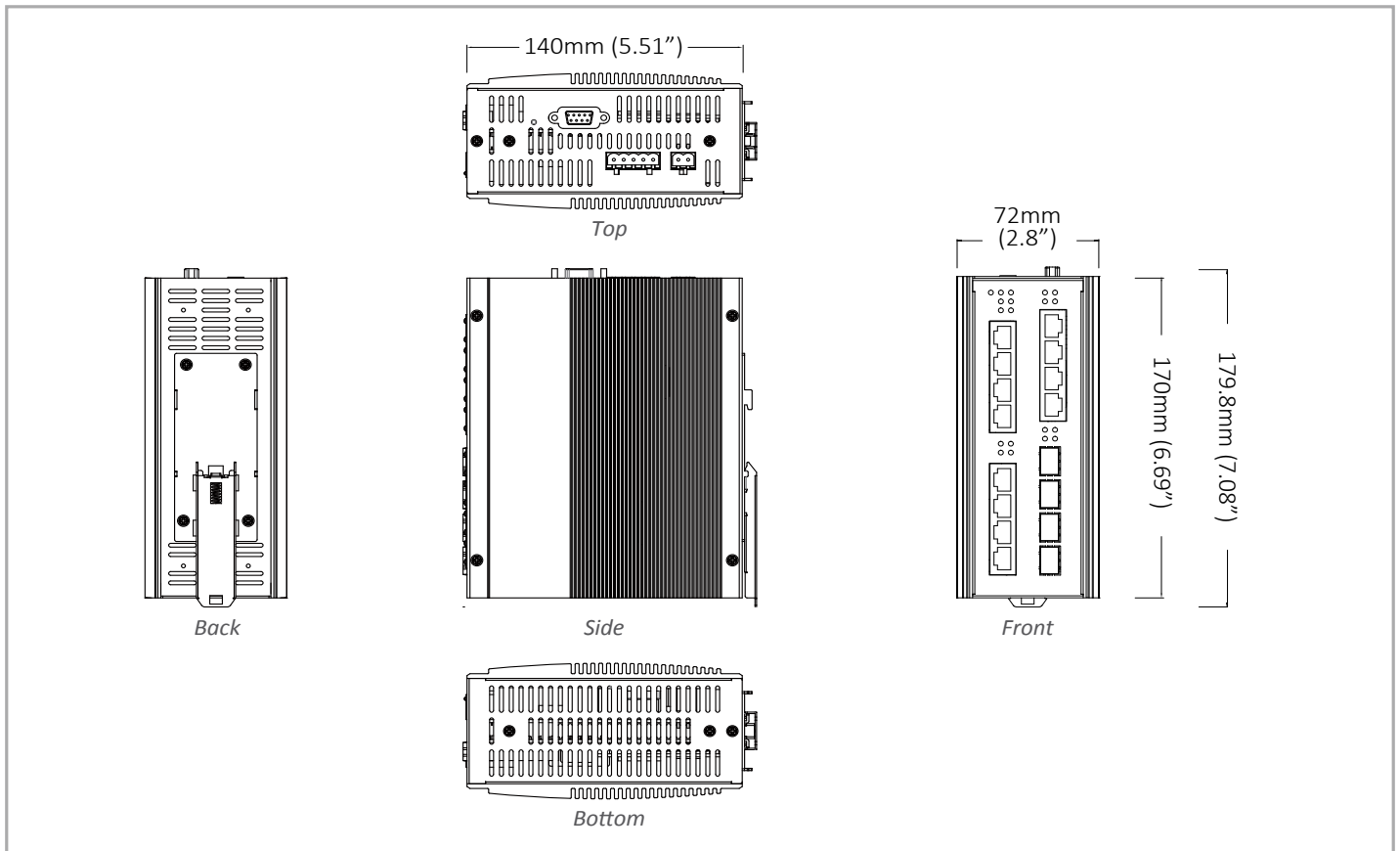
FED STD 101C Method 5007.1 (Free fall w/package)

Industrial Compliance

IEC 61850-3/IEEE 1613

NEMA TS2

Dimensions



Ordering Information

Model

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

* DIN-Rail mounting kit included.

Optional Accessories

HDR-30-24	30W/1.5A DIN-Rail 24VDC Industrial Power Supply
HDR-60-24	60W/2.5A DIN-Rail 24VDC Industrial Power Supply
EDR-75-24	75W/3.2A DIN-Rail 24VDC Industrial Power Supply
EB-232	Configuration Backup and Restoration Tool for EX83304 switch with firmware 2.02.2 or above