

## EX83304 Series

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



## 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)

## 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."

## 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 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

# 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

## Dimensions

### + 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)

### + 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

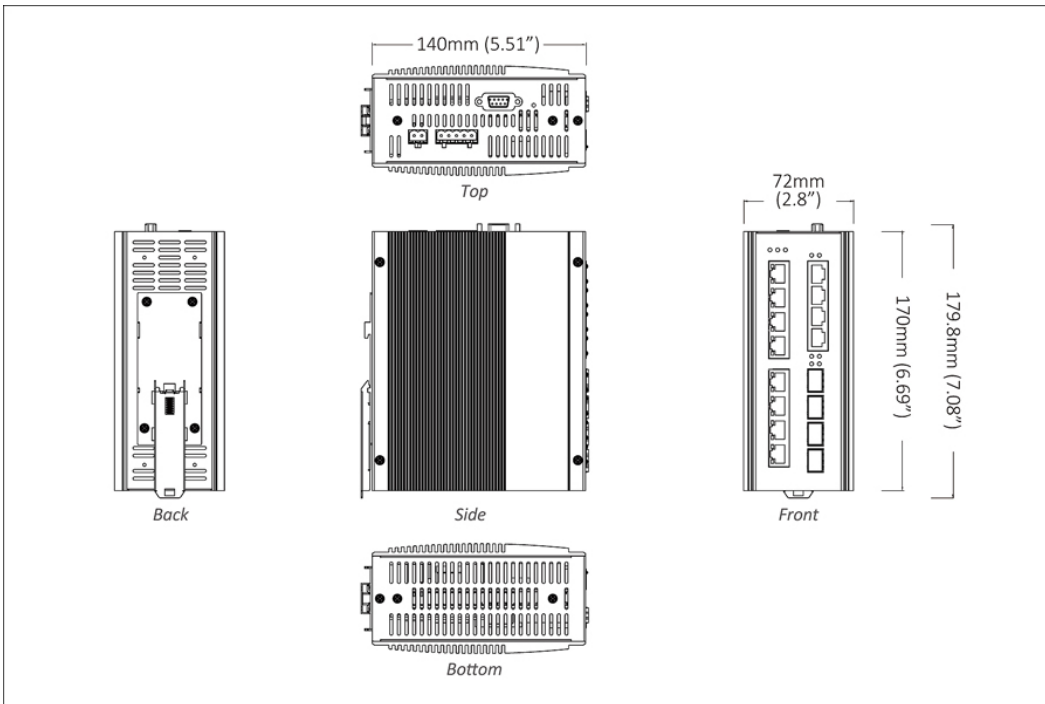
EN 61000-6-2  
EN 61000-4-2 (ESD Standards)  
EN 61000-4-3 (Radiated RFI Standards)  
EN 61000-4-4 (Burst Standards)  
EN 61000-4-5 (Surge Standards)  
EN 61000-4-6 (Induced RFI Standards)  
EN 61000-4-8 (Magnetic Field Standards)

#### 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



## Ordering Info

### + 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

