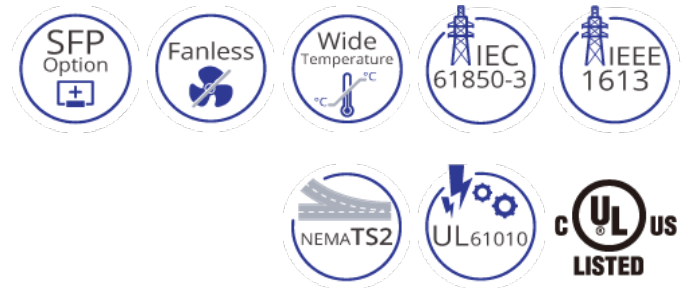


## EX83304 Series

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)

## 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)

## 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.)

### + 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

Installation  
DIN-Rail

## + Interface

### Ethernet Port

10/100BASE-TX: 8 or 12 ports

Gigabit SFP: 2/4 ports

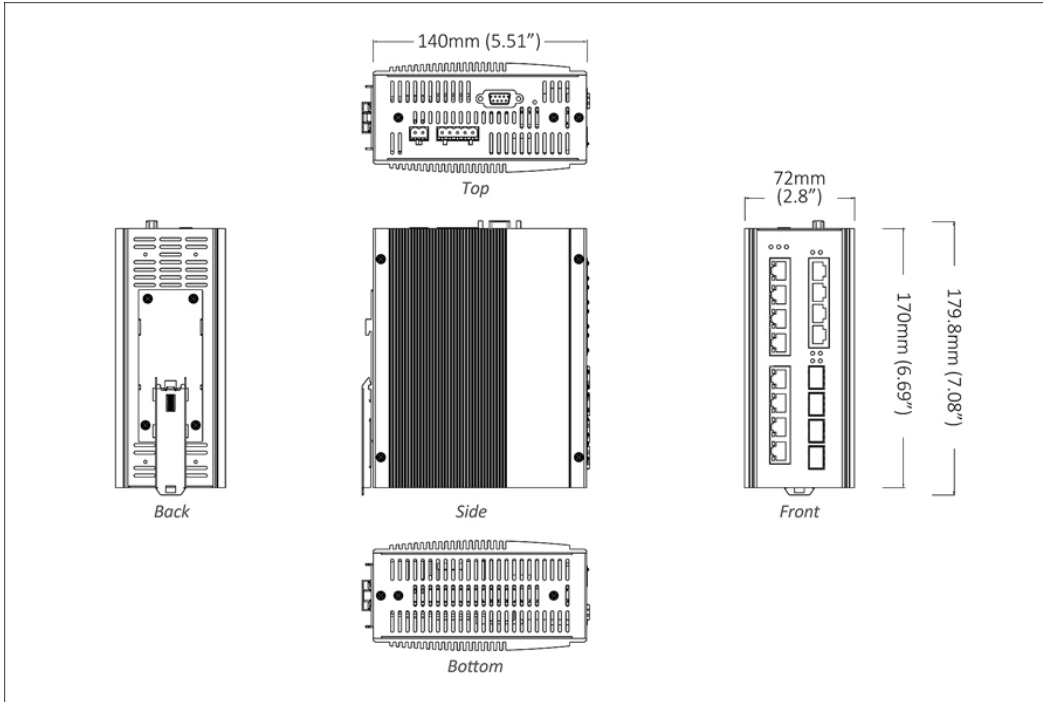
### Console Port

Port: One DB9 RS-232 port

### Alarm Contact

One relay output with current 0.6A/30VDC

## Dimensions



## 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

### EMI

FCC Part 15B Class A

VCCI Class A

EN 61000-6-4

EN 61000-3-2

EN 61000-3-3

### EMS

- EN 61000-4-2 (ESD Standards)
- EN 61000-4-3 (Radiated RF 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 Ec (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



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