

# EX94000 Series

Hardened Unmanaged 8-port 10/100BASE Ethernet Switch



## Overview

EtherWAN's EX94000 Series is a hardened unmanaged Fast Ethernet switching platform, designed for easy deployment in harsh environments. The EX94000 Series supports 12 to 48VDC redundant power input, and also provides relay alarm while power failure or port link down occur. The EX94000 provides 4kV surge protection, and is designed for hazardous locations (Class 1 Div.2/ATEX Zone 2).

The EX94000 is equipped with eight Fast Ethernet ports, or a combination of Fast Ethernet copper ports and two 100FX ports for long distance connectivity. This versatile switch features 10/100Mbps transfer speeds, full/half-duplex auto-negotiation and auto MDI/MDIX operation allowing you to connect your network devices without hassles.

The EX94000 is feature-rich with full wire speed Fast Ethernet throughput, QoS (Quality of Service), IEEE 802.3az EEE (Energy Efficient Ethernet) and Broadcast storm protection. The EX94000 Series is built with relay alarm to notify users when power fails or link down occurs. It also supports Broadcast storm protection by enabling the DIP switch. The 94000 Series is housed with DIN rail mountable metal compact case which is an ideal solution for applications in harsh environments.

EtherWAN – "When Connectivity is Crucial."

## Spotlight

### • Hardened Grade

- Supports -40 to 75°C (-40 to 167°F) operating temperature

### • Broadcast Storm Protection

- Enable/disable broadcast storm protection by DIP switch that provide another level of flexibility on industrial applications

### • Fiber Connectivity

- Up to two 100BASE-FX ports with SC, ST, WDM and SFP options

### • High Surge Protection and Hazardous Location Certification

- Provides 4kV surge protection
- Designed for hazardous locations (Class 1 Div.2/ATEX Zone 2)

### • High Reliability

- Fanless design
- No moving parts

# Hardware Specifications

## Technology

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### Standards

- IEEE 802.3u 100BASE-TX/FX
- IEEE 802.3x full-duplex flow control
- IEEE 802.3az Energy Efficient Ethernet
- IEEE 802.1p Quality of Service (QoS)

### Forward and Filtering Rate

- 14,880pps for 10Mbps
- 148,810pps for 100Mbps

### Packet Buffer Memory

- 448K 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

- 1K MAC addresses

## Power

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### Input Voltage

- 12 to 48VDC (Terminal Block)

### Power Consumption

- 12VDC@4.34W, 24VDC@4.57W, 48VDC@6.28W

### Protection

- Reverse polarity protection

## Mechanical

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### Casing

- Aluminum Case
- IP30

### Dimensions

- 50 x 110 x 135mm (W x D x H)  
(1.97" x 4.33" x 5.31")

### Weight

- 0.62Kg (1.37lbs)

### Installation

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

## Interface

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### Ethernet Ports

- 10/100BASE-TX: 8, 6 or 4 ports
- 100BASE-FX: 0, 2 or 1 ports

### LED Indicators

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

### DIP Switches

- Enable/Disable Port fault alarm
- Enable/Disable Broadcast Storm Protection

### Alarm Contact

- One relay output with current 1A@250VAC
- Supports normal close and normal open

## Environment

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### 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

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### ISO

- Manufactured in an ISO 9001 facility

### Safety

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#### UL 60950

#### ISA 12.12.01 Class I Div. 2/ATEX Zone 2

### EMI

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#### FCC Part 15B Class A

#### VCCI Class A

#### EN 61000-6-4

#### EN 61000-3-2

#### EN 61000-3-3

#### EN 55022 Class A

### EMS

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#### EN 61000-6-2

- EN 61000-4-2 (ESD Standards)
- EN 61000-4-3 (Radiated FRI Standards)
- EN 61000-4-4 (Burst Standards)
- EN 61000-4-5 (Surge Standards)  
Signal ports:  $\pm 4$ kV line-to-earth  
DC power ports:  $\pm 4$ kV line-to-earth  
 $\pm 2$ kV line-to-line
- EN 61000-4-6 (Induced RFI Standards)
- EN 61000-4-8 (Magnetic Field Standards)

### Environmental Test Compliance

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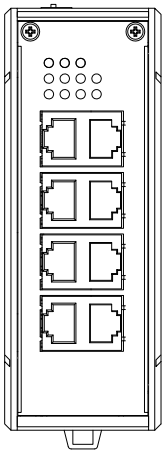
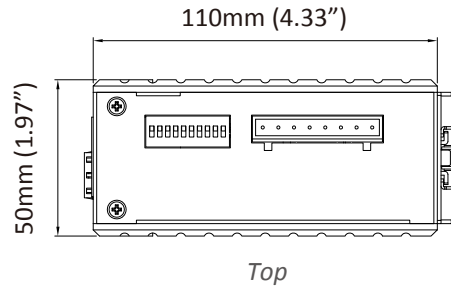
#### IEC 60068-2-6 Fc (Vibration)

#### IEC 60068-2-27 Ea (Shock)

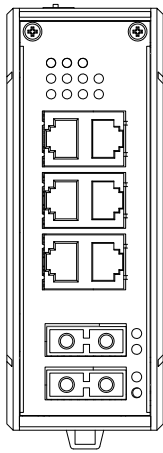
#### FED STD 101C Method 5007.1 (Free fall w/package)

- Tested with Cross Weight and Drop High standard table

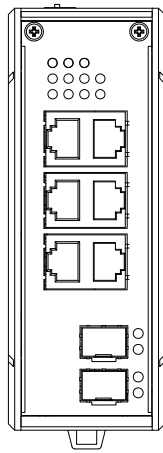
# Dimensions



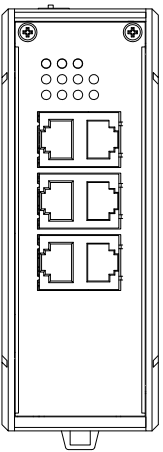
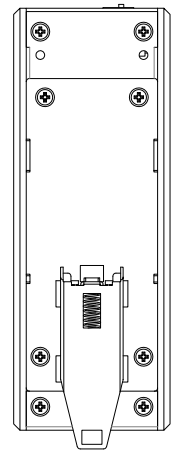
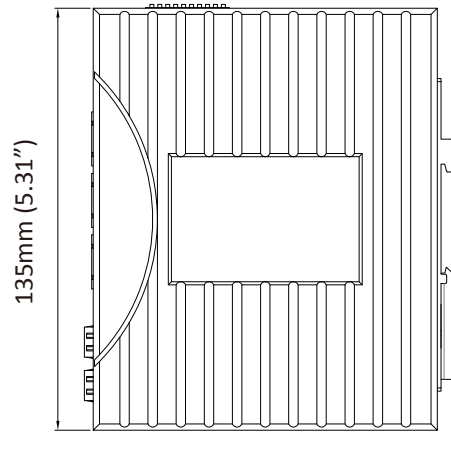
Front  
EX94008



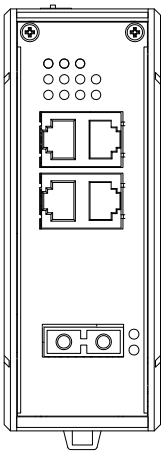
Front  
EX94026



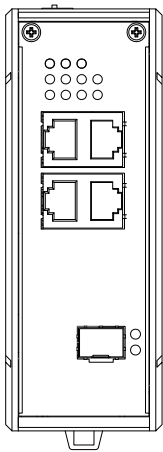
Front  
EX94026



Front  
EX94006



Front  
EX94014



Front  
EX94014



## Ordering Information

### Model

|                        |  |
|------------------------|--|
| <b>EX94008-00-1-AA</b> | 8-port 10/100BASE-TX Hardened Unmanaged Ethernet Switch                    |
| <b>EX94006-00-1-AA</b> | 6-port 10/100BASE-TX Hardened Unmanaged Ethernet Switch                    |
| <b>EX94026-XY-1-AA</b> | 6-port 10/100BASE-TX +2-port 100BASE-FX Hardened Unmanaged Ethernet Switch |
| <b>EX94014-XY-1-AA</b> | 4-port 10/100BASE-TX +1-port 100BASE-FX Hardened Unmanaged Ethernet Switch |

\* DIN-Rail mounting kit included.

### 100FX Fiber Options (XY)

|           |   |
|-----------|---|
| <b>1A</b> | Multi Mode (SC) - 2Km                           |
| <b>1B</b> | Multi Mode (ST) - 2Km                           |
| <b>2A</b> | Single Mode (SC) - 20Km                         |
| <b>2D</b> | Single Mode (ST) - 20Km                         |
| <b>2E</b> | Single Mode (SC) WDM-TX: 1310nm/RX: 1550nm-20Km |
| <b>2G</b> | Single Mode (SC) WDM-TX: 1550nm/RX: 1310nm-20Km |
| <b>V</b>  | 100BASE SFP                                     |

\* More 100FX Fiber options also available upon request.

### Optional Accessories

|                    |   |
|--------------------|---|
| <b>KP-AA96-480</b> | Panel Mounting Kit                              |
| <b>KR-BKEL900</b>  | Rack Mounting Kit                               |
| <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 |