

# EX75000 Series

Hardened Managed 24-port 10/100BASE-TX + 4-port Gigabit Ethernet PoE Switch



## Overview

EtherWAN's EX75000 Series provides a hardened 28-port switching platform supporting IEEE802.3at Power over Ethernet, high performance switching with robust management features required for mission-critical and harsh environments where sustained connectivity is crucial.

The EX75000 Series is equipped with 24 10/100BASE-TX PoE ports, in combination with two Gigabit PoE ports and two Gigabit SX/LX/BX/WDM Fiber ports with SFP options.

The IEEE802.3at PoE ports provide up to 30W/port with a total power budget of 420W, making the switch truly versatile for connecting with PoE Powered Devices (PD) with different bandwidth and power consumption requirements such as outdoor PTZ dome cameras, wireless access points, and way-side communication devices.

1U rack mountable, the EX75000 Series is equipped with EtherWAN's Alpha-Ring self-healing ring technology providing less than 15ms fault recovery time. Users are able to access management features such as port security, IGMP snooping, port-based VLAN, GARP protocols, Link Aggregation, via web browser, Telnet, SSH, SNMP, RMON, TFTP, and RS-232 console interfaces. With the hardened specifications, the EX75000 Series is designed to operate at -40°C to 75°C in harsh environments, where high ESD, shock, and vibration may be present.

EtherWAN — "When Connectivity is Crucial."

## Spotlight

### • High-Density PoE Switch

- Up to 26 IEEE802.3at PoE ports
- 4 Gigabit (SX/LX/SFP) ports for high-bandwidth communication

### • Intelligent Data and Power Management

- Optimize network performance with QoS, VLAN and PoE scheduling, etc.
- Network redundancy secured with EtherWAN's Alpha-Ring network fault recovery time < 15ms

### • Secure Remote Access

- IEEE802.1x, ACL (Access Control List), and RADIUS support

# Software Features

## Management

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- 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)
- Port mirroring: TX/RX and both
- SFP transceivers support Digital Diagnostics Monitoring (DDM)
- NTP (Network Time Protocol) time synchronization
- IEEE802.1ab LLDP (Link Layer Discovery Protocol)

## Security

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- 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
- ACL

## Quality of Service (QoS)

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- 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

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- 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 with 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

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- Switching Capability: 12.8Gbps
- Packet Buffer Size: 3M bits
- MAC Address Table: 8K
- Jumbo frame: 2048 bytes

# Hardware Specifications

## Technology

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### 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
- IEEE802.1s MSTP
- IEEE802.3ad LACP
- IEEE802.3af/at Power over Ethernet (PoE)

### Forward and Filtering Rate

- 14,880pps for 10Mbps
- 148,810pps for 100Mbps
- 1,488,100pps for 1000Mbps

### Packet Buffer Memory

- 3M 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

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### Input Voltage

- Terminal Block: 55 (48 to 57VDC)

### Power Consumption

- Max. 30W (without PoE)
- PoE power budget: 420W (depends on power input)
  - Port 01 to Port 08, 10/100 PoE ports: 120W
  - Port 09 to Port 16, 10/100 PoE ports: 120W
  - Port 17 to Port 24, 10/100 PoE ports: 120W
  - Port 25 to Port 26, 10/100/1000 PoE ports: 60W

### Protection

- Overload current protection

## Mechanical

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### Casing

- Metal Case
- IP30

### Dimensions

- 442mm (W) x 343mm (D) x 44.2mm (H)  
(17.4" (W) x 13.5" (D) x 1.74" (H))

### Weight

- Single Power: 5.15Kg (11.35lbs.)
- Redundant Power: 6.2Kg (13.7lbs.)

### Installation

- Rack mounting

## Interface

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### Ethernet Port

- 10/100BASE-TX: 24 ports
- Gigabit: 4 ports

### Console Port

- Port: One DB9 RS-232 port

### LED Indicators

- Per Unit: Power (Green), Alarm (Red)
- Per Port: Link/Activity (Green)

## Environment

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### Operating Temperature

- -40°C to 75°C (-40°F to 167°F)  
Tested @ -40°C to 85°C (-40°F to 185°F)

### Storage Temperature

- -45°C to 85°C (-49°F to 185°F)

### Ambient Relative Humidity

- 5% to 95% (non-condensing)

## Regulatory Approvals

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### ISO

- Manufactured in an ISO9001 facility

### EMI

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#### FCC Part 15B, Class A

#### VCCI Class A

#### EN61000-6-4

#### EN55022

### EMS

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#### EN61000-6-2

- EN61000-4-2 (ESD Standards)
- EN61000-4-3 (RFI Standards)
- EN61000-4-4 (Burst Standards)
- EN61000-4-5 (Surge Standards)
- EN61000-4-6 (Induced RFI Standards)
- EN61000-4-8 (Magnetic Field Standards)

### Environmental Test Compliance

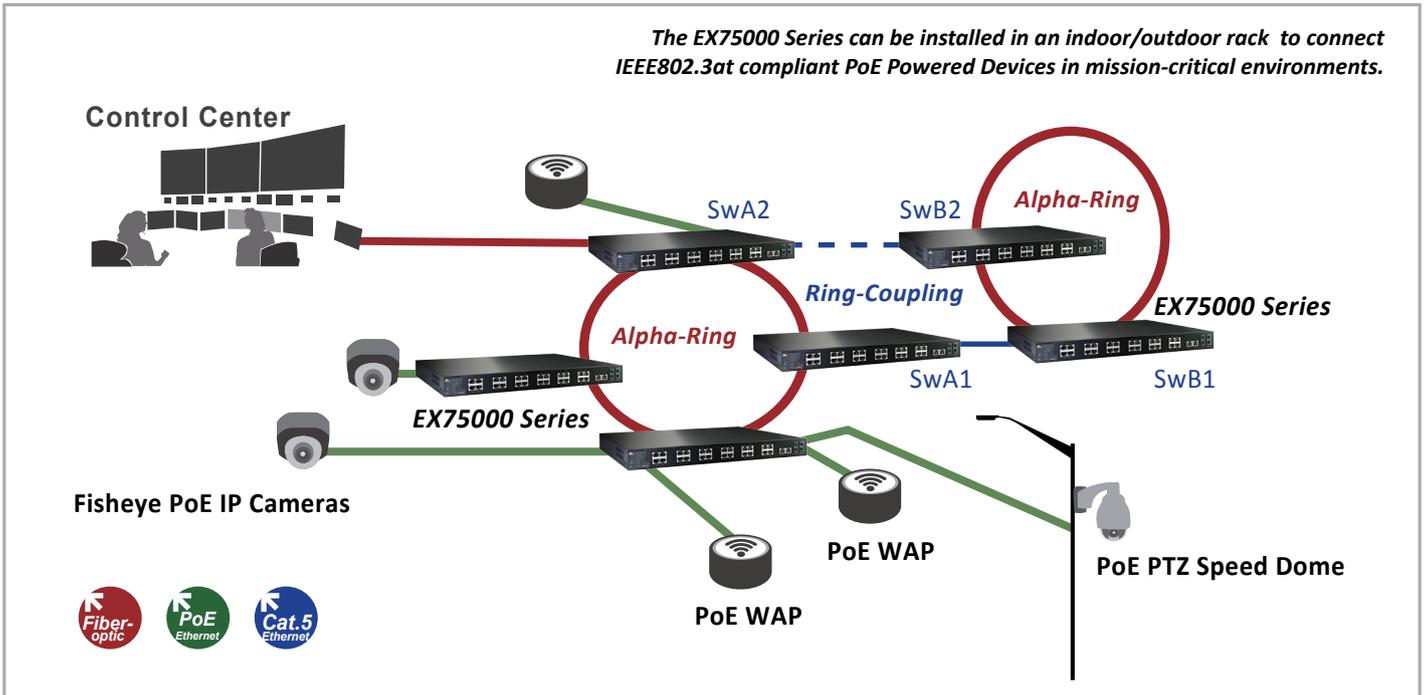
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#### IEC60068-2-6 Fc (Vibration)

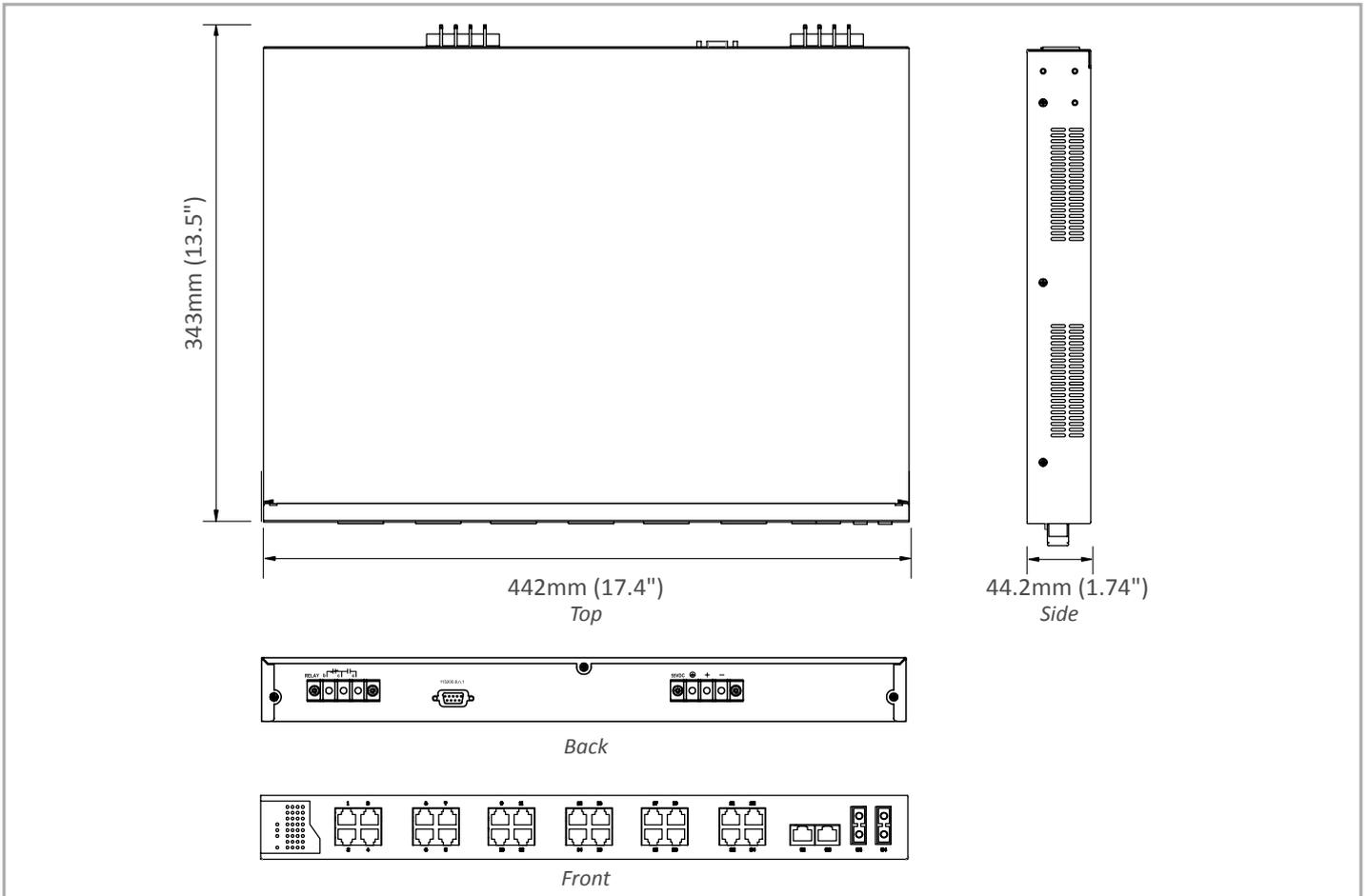
#### IEC60068-2-27 Ea (Shock)

#### IEC60068-2-32 Ed (Free fall)

# Application Diagram



# Dimensions



## Ordering Information

### Model

<b>EX75604-0XYGT</b>	24-port 10/100BASE-TX PoE + 2-port 10/100/1000BASE-T PoE + 2-port 1000BASE-T/SX/LX Hardened Managed Ethernet Switch
<b>EX75064-04VGT</b>	24-port 10/100BASE-TX PoE + 4-port 1000BASE SFP Hardened Managed Ethernet Switch

\* Rack mounting kit included

### Number of Fixed Gigabit Fibers (X)

<b>0</b>	None
<b>2</b>	Two Gigabit Fiber ports
<b>4</b>	Four Gigabit Fiber ports

### Gigabit Port Options (Y)

<b>1</b>	10/100/1000BASE-TX
<b>3</b>	1000BASE-SX(SC) - 550m
<b>4</b>	1000BASE-SX (SC) - 2Km
<b>A</b>	1000BASE-LX (SC) - 10Km
<b>B</b>	1000BASE-LX (SC) - 20Km
<b>R</b>	1000BASE-BX (SC) WDM-TX:1310nm/RX:1550nm - 20Km
<b>S</b>	1000BASE-BX (SC) WDM-TX:1550nm/RX:1310nm - 20Km
<b>V</b>	1000BASE SFP (DDM)

### Optional Accessories

<b>SDR-480-48</b>	480W/10A DIN-Rail Industrial Power Supply (for terminal block)
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