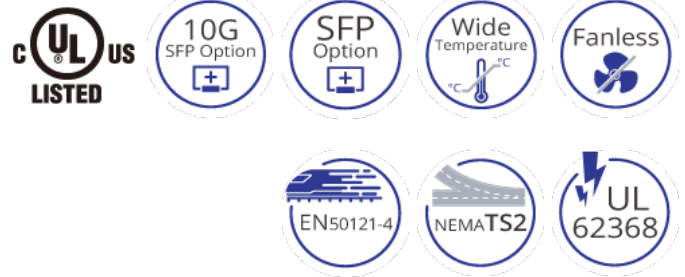


# EG97023 Series

12-port 10 Gigabit and 8-port Gigabit Hardened Managed Layer 3 Switch



## Overview

### [When should you use an Industrial Layer 3 switch?](#)

EtherWAN's EG97023 is a hardened layer 3 core/distribution switch, designed to support high bandwidth routing in harsh environments. Equipped with 12 ports capable of up to 10-gigabit speed each and 8 additional gigabit ports, along with a full capacity switching bandwidth, the EG97023 provides the optimal solution for connecting multiple networks. In addition to layer 3 benefits such as improved fault isolation, simplified security management, network traffic segregation, lower network latency, and simplified troubleshooting, the EG97023 is hardened and fan-less, designed to last and operate through the harshest environments. Backed by a limited lifetime warranty, the EG97023 provides flexibility, ultra-fast speeds, and reliability to support networks in urban infrastructure, transportation, security and other areas where connectivity is crucial.

EtherWAN — "When Connectivity is Crucial."

## Highlights

### + High Density, High Bandwidth Fiber Solution

- Multiple ports with ultra-fast 10-gigabit speeds running at full capacity
- 12 dual-rate 10-gigabit SFP+ ports for fiber connections into the core/hub
- 8 dual-rate gigabit SFP ports for fiber connections to the nodes/edge

### + Hardened-Grade for Non-Ventilated & Harsh Environments

- Wide operating temperature range -40 to 75°C (-40 to 167°F)
- Fan-less operation
- Thermal shock and electrical noise resistance

### + Full Layer 3 Functionality

- Optimized routing at hardware level
- Improved fault isolation
- Layer 3 capability connects networks together

### + Compliant Products

- NEMA TS2 rated
- UL certified for safety
- TAA/NDAA compliant for government projects

### + Management/Security Features

- Port Security, Authentication, and Access Control
- Storm Detection, IP ACL, and System Logging
- Configure and monitor with eVue™

### + Lifetime Warranty

- Complimentary Technical Support
- Free Firmware Upgrades

## Features

### + Interface

- CLI, Telnet, Web GUI

### + Management

- Firmware upgrade
- Configuration backup
- DHCP Server/Client
- RMON (Remote Monitoring)
- Port Mirroring
- NTP (Network Time Protocol) synchronization
- LLDP (Link Layer Discovery Protocol)
- IPv4/IPv6
- SNMP v1/v2c/v3

### + Security

- MAC Address filtering
- Enable/Disable port
- Storm control
- System logging
- Remote authentication through RADIUS and TACACS+
- Complex password support
- Multi-user login and privileged access management
- SSH for CLI and Telnet security
- SSL and HTTPS for web security
- ACL (Access Control List, up to 4096 entries)

### + Layer 2 Features

#### Auto-negotiation for port speed and duplex

- Flow Control
- IEEE 802.3x full duplex mode
- Back-pressure half duplex mode

#### Redundant Protocols

- IEEE 802.1D STP
- IEEE 802.1w RSTP
- IEEE 802.1s MSTP

#### VLANs

- IEEE 802.1Q Tag VLANs
- GVRP
- GMRP

#### Link Aggregation

- Static Trunk
- IEEE 802.3ad LACP

#### IGMP Snooping v1/v2/v3

## + Quality of Service (QoS)

- Priority Queues: 8 queues per port
- Traffic classification based on IEEE 802.1p CoS (Cost of Service), DSCP (Differentiated Services Code Point), WRR (Weighted Round Robin), and strict mode
- Rate Limiting (Ingress/Egress)

## + Layer 3 Features IPv4

### Unicast Routing

- Static Routing (1K)
- RIP v1/v2
- OSPF v2

### Multicast Routing

- PIM-DM
- PIM-SM

### Routing Redundancy

- VRRP

## + Layer 3 Features IPv6

### IPv6 Unicast Routing

- RIPng
- OSPF v3

### IPv6 Multicast Routing

- PIM6-DM
- PIM6-SM

### IPv6 Routing Redundancy

- VRRP v3

## + Software Properties and Performance

### Switching Fabric

- 256Gbps

### Forwarding Rate

- 190.4Mpps

### Total VLAN Entries

- 256 (4096 VID)

### Jumbo Frame Size

- 12KB

### MAC Table Size

- 24K

### Packet Buffer Memory

- 32M bits

### L2 Routes

- Up to 24,000 unicast and 1,000 multicast routes

### L3 IPv4 Routes

- Up to 8,000 unicast and 8,000 multicast routes

### L3 IPv6 routes

- Up to 2,000 unicast routes

## Specifications

## + Interface

### Ethernet

- 8 x 100/1000 BASE-SFP
- 12 x 1G/10G SFP+

### Console

- 1 x RJ45, 1 x USB

### Config Backup

- 1 x USB (Type A Connector)

### Alarm Contact

- Relay output, current capacity  
0.6A/30VDC

### LED Indicators

- Per Unit: Power 1, Power 2, Alarm
- Per Port: Link/Activity

## + Power

### Input

- VWR: 100-240VAC Redundant (Terminal block)
- VCR: 100-240VAC Redundant (AC Inlet)

### Power Consumption

- 75W Max

## + Physical

### Casing Material

- Metal

### Dimensions

- 442 x 325 x 44mm (W x D x H)  
17.4" x 12.8" x 1.73"

### Weight

- 6.2kg (13.7lbs)

### Installation Type

- Rack mounting

## + Environmental

### Operating Temp.

- -40 to 75°C (-40 to 167°F)

### Storage Temp.

- -45 to 85°C (-49 to 185°F)

### Relative Humidity

- 5% to 95% (non-condensing)

### MTBF

- 585224 Hours at 25°C

## + Warranty

### Length

- Limited Lifetime

### Details

- [www.etherwan.com/support/warranty-policy](http://www.etherwan.com/support/warranty-policy)

## + What's Included

### Device

- Ethernet Switch

### Cables

- 1 Console Cable

### Power

- 2 AC Power Cord

### Installation

- Mounting Brackets, Screws

### Documentation

- Quick Install Guide

## + Technology

### Standards

- IEEE 802.3u 100BASE-TX/100BASE-FX
- IEEE 802.3ab 1000BASE-T
- IEEE 802.3ad link aggregation control
- IEEE 802.3z 1000BASE-SX/1000BASE-LX
- IEEE 802.3ae 10Gbit/s Ethernet over fiber for LAN
- IEEE 802.3an 10GBASE-T Ethernet over copper twisted pair cable
- IEEE 802.3x full duplex and flow control
- IEEE 802.1D STP
- IEEE 802.1p QoS
- IEEE 802.1Q Tag VLANs
- IEEE 802.1s MSTP
- IEEE 802.1w RSTP
- IEEE 802.1x PNAC
- IEEE 802.1ab LLDP

### Forward/Filtering Rate

- 148,810pps for 100Mbps
- 1,488,100pps for 1000Mbps
- 14,881,000pps for 10Gbps

### Processing Type

- Store-and-forward
- Auto-negotiation  
Half-duplex back-pressure and fullduplex flow control
- Auto MDI/MDIX

### System Memory

- 4Gb DDR3 SDRAM

### Flash Storage

- 2GB

## + Regulatory

### ISO

- Manufactured in ISO-9001 facility

### EMC

- EN 55032

### EMI

- FCC Part 15B Class A
- VCCI Class A
- EN 61000-6-4

### EMS

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

### Safety

- UL 62368-1

### Traffic

- NEMA TS2

### Rail

- EN 50121-4

### Vibration

- IEC 60068-2-6

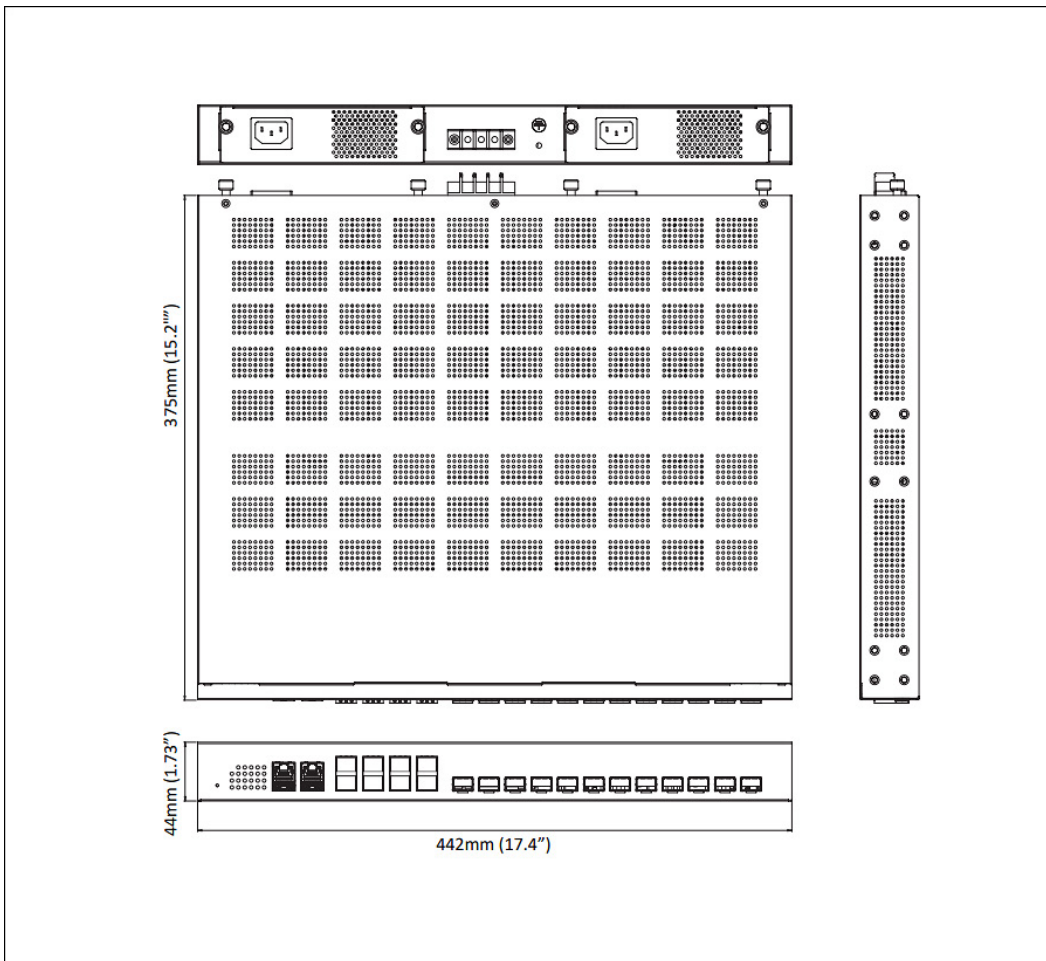
### Shock

- IEC 60068-2-27

### Free Fall

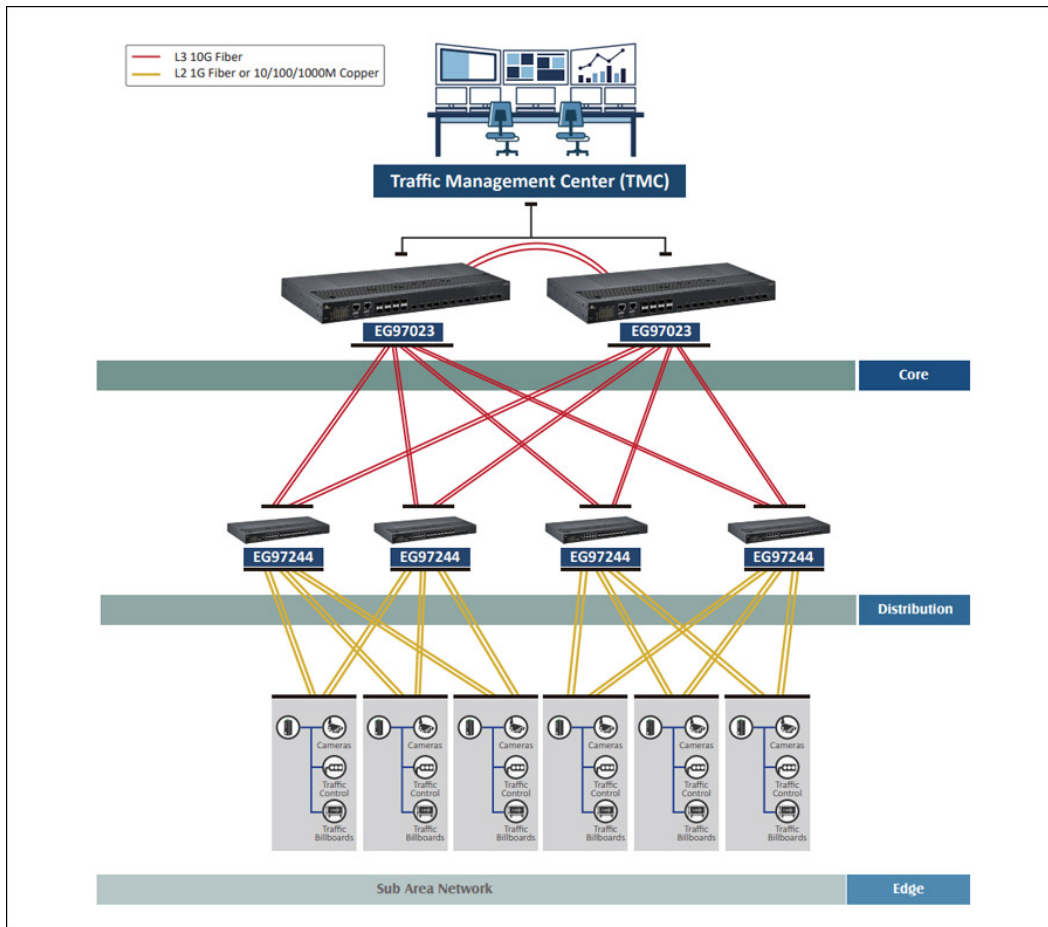
- FED STD 101C Method 5007.1

## Dimensions





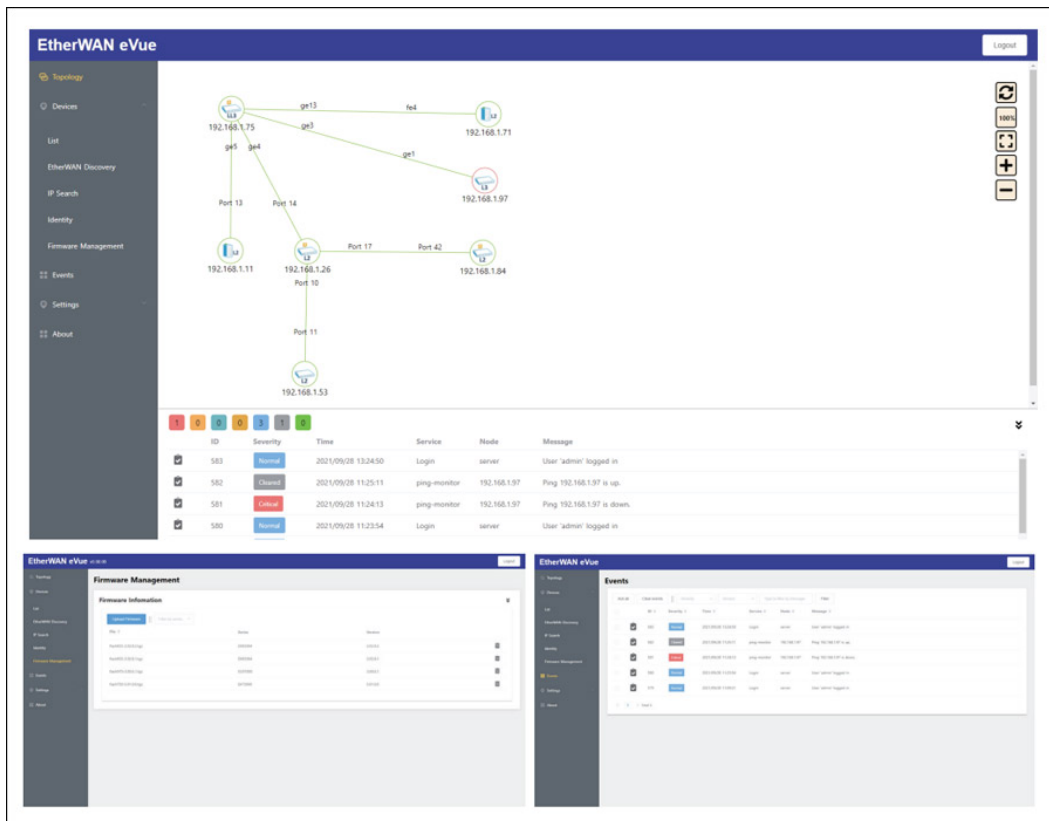
# Application



## Software

Network Management [eVue™ Network Configuration and Monitoring Tool](#)

Network Discovery [eLite™ Network Discovery and IP Configuration Tool](#)

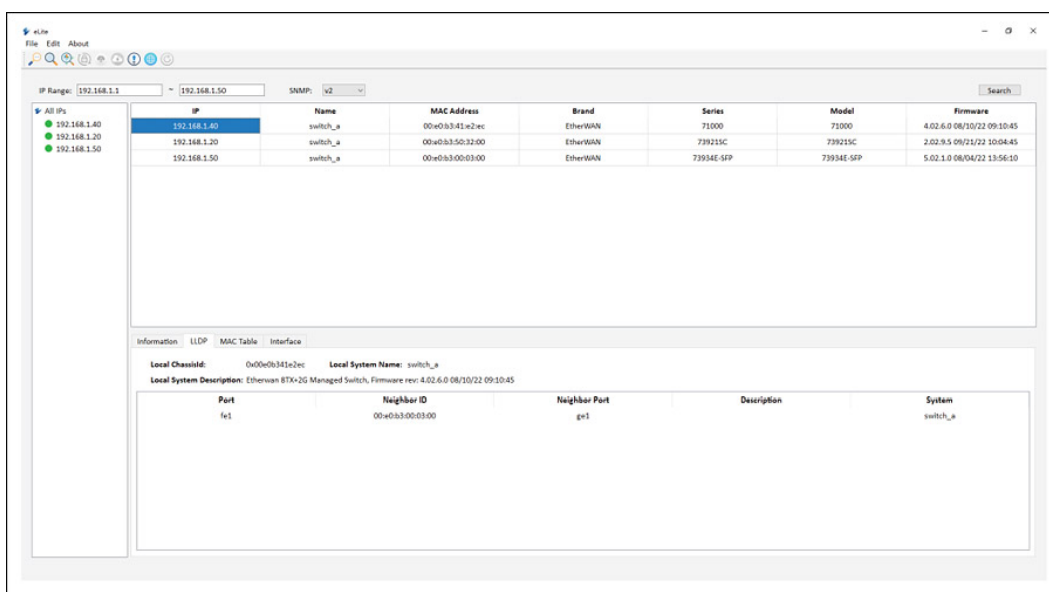


The screenshot displays the EtherWAN eVue interface. The top section shows a network topology diagram with nodes and connections. Below the diagram is a table of events.

ID	Severity	Time	Service	Node	Message
583	Success	2021/09/28 13:24:50	Login	server	User 'admin' logged in
582	Success	2021/09/28 11:25:11	ping-monitor	192.168.1.97	Ping 192.168.1.97 is up.
581	Success	2021/09/28 11:24:13	ping-monitor	192.168.1.97	Ping 192.168.1.97 is down.
580	Success	2021/09/28 11:23:54	Login	server	User 'admin' logged in

The bottom section shows the 'Firmware Management' tab, which displays a table of firmware information.

File	Name	Version
firmware-ethernet	ethernet	4.02.6.0
firmware-ethernet	ethernet	4.02.6.0
firmware-ethernet	ethernet	4.02.6.0
firmware-ethernet	ethernet	4.02.6.0



The screenshot displays the EtherWAN eLite interface. The top section shows a table of IP addresses and their details.

IP	Name	MAC Address	Brand	Series	Model	Firmware
192.168.1.40	switch_a	00:e0:b3:41:e2:ec	EtherWAN	71000	71000	4.02.6.0 08/10/22 09:10:45
192.168.1.20	switch_a	00:e0:b3:50:32:00	EtherWAN	739215C	739215C	2.02.9.5 09/21/22 10:04:45
192.168.1.50	switch_a	00:e0:b3:00:03:00	EtherWAN	73934E-SFP	73934E-SFP	5.02.1.0 08/04/22 13:56:10

The bottom section shows the 'Information' tab, which displays details about the local system and its neighbors.

Port	Neighbor ID	Neighbor Port	Description	System
fe1	00:e0:b3:00:03:00	ge1		switch_a

# Ordering Info

## + Model

EG97023-2VZ	8-port 100/1000BASE SFP + 12-port 1/10G SFP+ Hardened Managed Layer 3 Ethernet Switch
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## + Power Input Interface (Z)

WR	100-240VAC Redundant (Terminal Block)
CR	100-240VAC Redundant (AC Inlet)

## + Accessories

Hardened SFP Modules	<a href="http://www.etherwan.com/products/sfp-fiber-transceiver">www.etherwan.com/products/sfp-fiber-transceiver</a>
Power Modules	Spare Power Module for EG97023 series, 100-240VAC PSU (85W), AC Inlet

