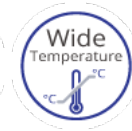


# EG97023 Series

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

### + Compliant Products

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

### + 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

### + Management/Security Features

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

### + Full Layer 3 Functionality

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

### + 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  
ITU-T G.8032 Ethernet Ring  
Protection Switch (ERPS)

#### **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/2.5G/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

### IP Rating

IP30

## + 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 61000-6-2  
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

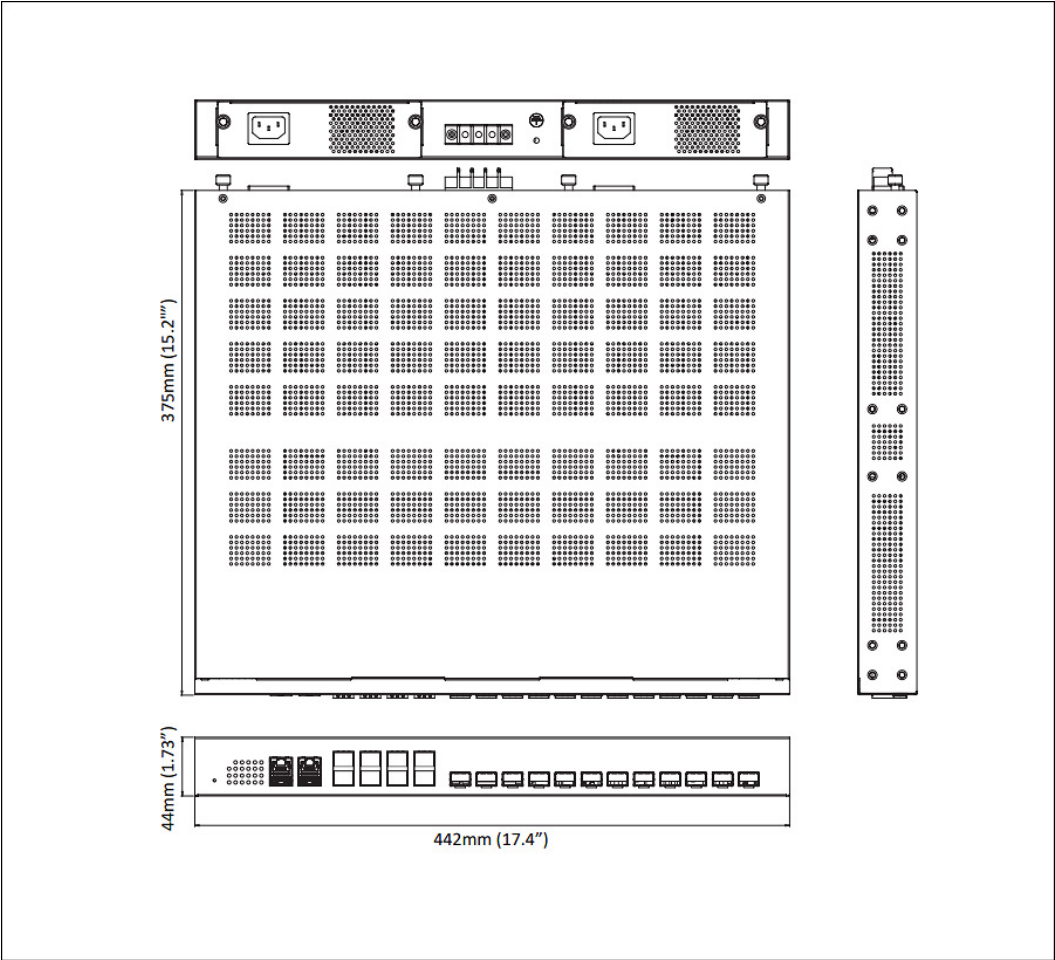
### Shock

IEC 60068-2-27

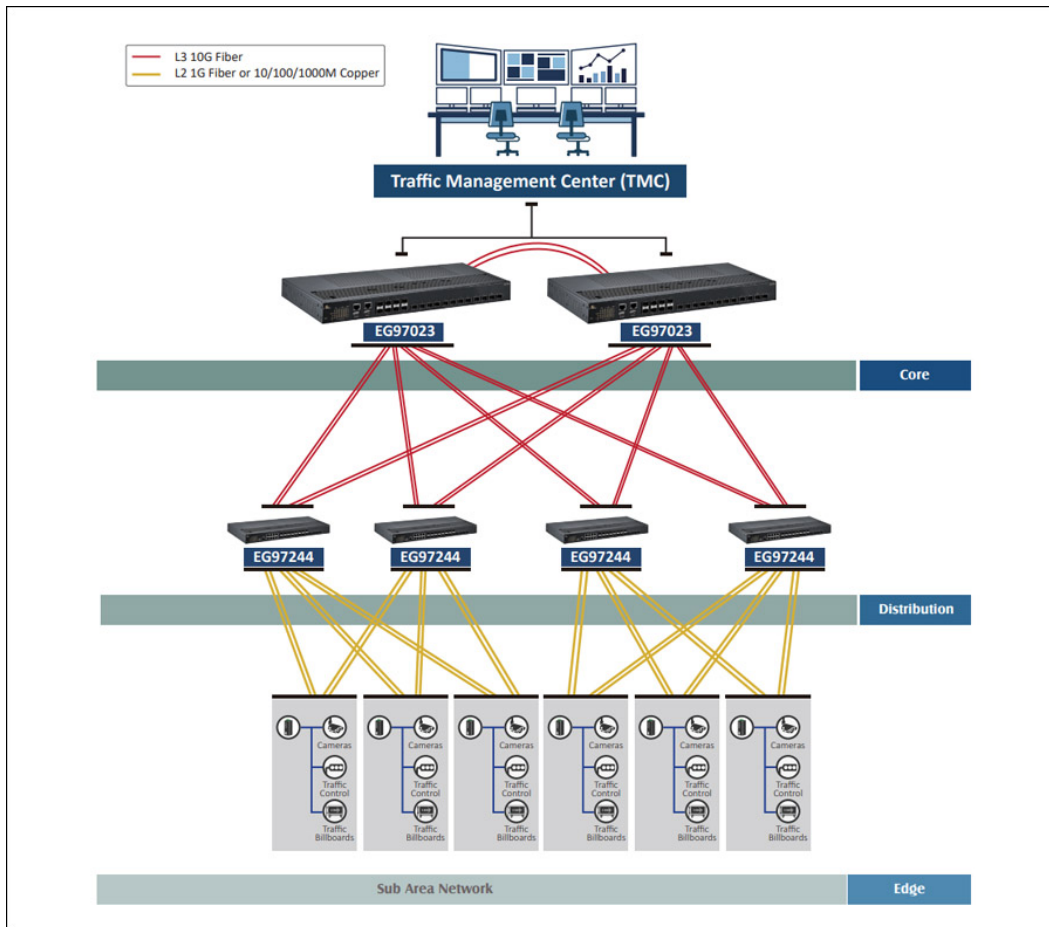
### Free Fall

FED STD 101C Method 5007.1

# Dimensions



# Application



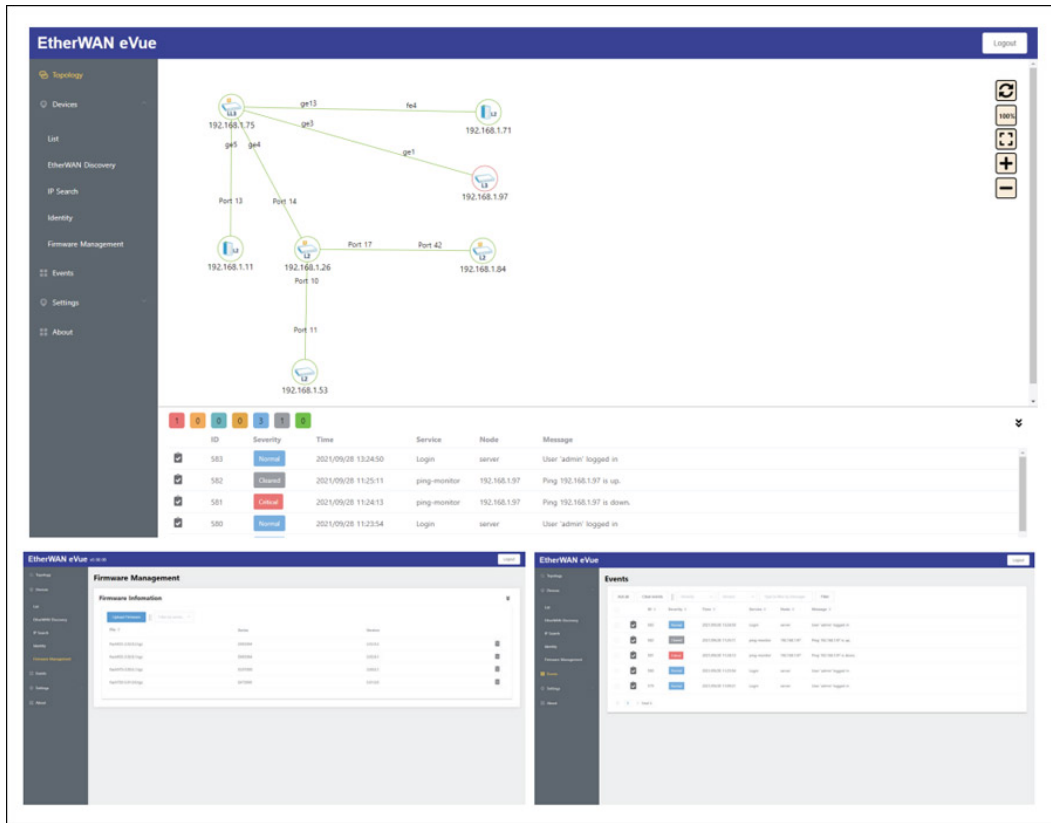
## Software

Network Management

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

Network Discovery

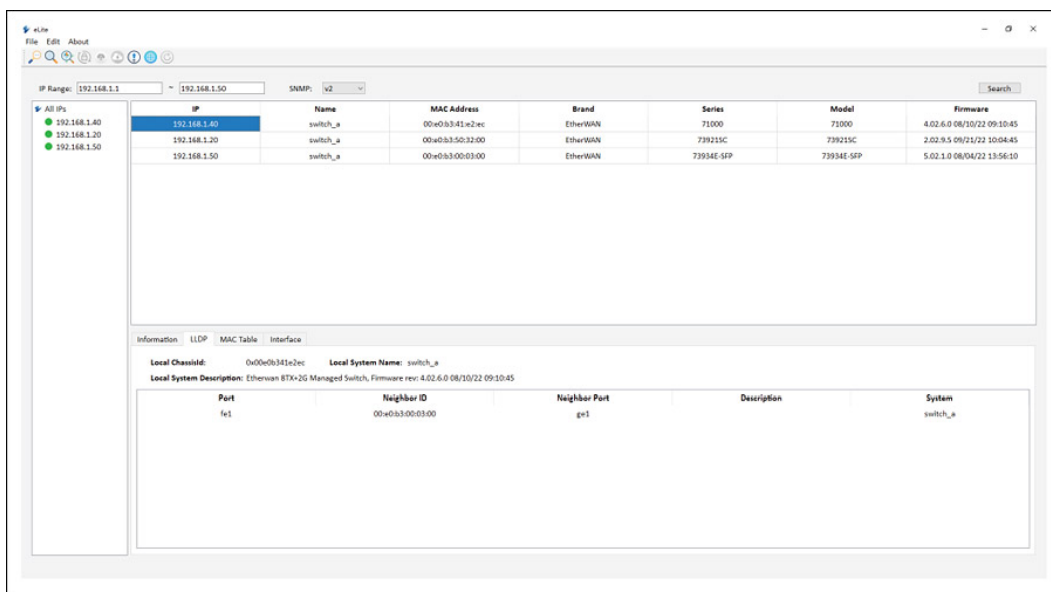
[eLite™ Network Discovery and IP Configuration Tool](#)



The screenshot displays the EtherWAN eVue web 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 | Warning  | 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     |

Below the events table, there are two panels: 'Firmware Management' and 'Events'. The 'Firmware Management' panel shows a table of firmware versions for various devices. The 'Events' panel shows a list of events with filters and a search bar.



The screenshot displays the EtherWAN eLite web interface. The top section shows a table of IP ranges and device details. Below the table is a section for 'Local System Information'.

| IP Range    | IP           | Name     | MAC Address       | Brand    | Series     | Model      | Firmware                   |
|-------------|--------------|----------|-------------------|----------|------------|------------|----------------------------|
| 192.168.1.1 | 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 |
| 192.168.1.1 | 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 |
| 192.168.1.1 | 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 |

Below the table, there is a section for 'Local System Information' with tabs for 'Information', 'LLDP', 'MAC Table', and 'Interface'. The 'LLDP' tab is selected, showing details for 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           |                 |
|-----------------------|-----------------|
| 100/1000Base SFP      | 8               |
| 1/2.5/10G SFP+        | 12              |
| QoS                   | Layer 3 Managed |
| <a href="#">Quote</a> |                 |

## + 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                                                |

