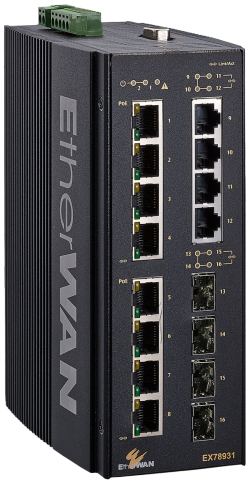
EX78900 Series

Hardened Managed 16-port (8 x PoE) Gigabit Ethernet Switch



Overview

This product is discontinued as of 30 Dec. 2024.click here for alternative product.

When should you use an Industrial Layer 3 switch?

EtherWAN's EX78900 Series is a hardened DIN-rail mounted managed PoE Ethernet switch platform. Equipped with up to 12 gigabit ports with 8-port PoE that provides up to 60W/port and 4 fiber ports, the EX78900 Series provides flexibility, speed, and reliability for networks in urban infrastructure, transportation, security, and other areas where connectivity is crucial.

EtherWAN — "When Connectivity is Crucial."

Highlights

This product has been discontinued as of 05/31/22. Please see the following for an alternative product: EX78900E Series

High Bandwidth and Versatility

8 or 12 10/100/1000BASE-T(X) ports for high bandwidth connections
Up to 4 gigabit fiber connections
Full capacity switching running at full duplex

Hardened-Grade for Non-Ventilated & Harsh Environments

Wide operating temperature range -40 to 75°C (-40 to 167°F)
Fanless operation
High impact, thermal shock, and electrical noise resistance

L2/L3 Functionality

Static routing, RIP v1/v2, and OSFP
Redundancy with VRRP
Reduces amount of broadcast traffic

PoE Features

Up to 60W/port with 240W total power budget
Long distance PoE up to 250m (820ft)
PoE watchdog monitors status of connected PoE devices

Management/Security Features

Port control
802.1x port-based network access control and remote authentication through RADIUS
Configure and monitor with eVue™ and eLite™

Support

Complimentary Technical Support
Free Firmware Upgrades
Limited Lifetime Warranty

Features

Interface

CLI, Telnet, Web GUI

SNMP v1/v2c/v3

Management

Firmware and configuration upgrade and backup via TFTP

DHCP Server/Client

RMON (Remote Monitoring): group 1, 2, 3, 9

Port Mirroring: TX/RX and both

NTP (Network Time Protocol) 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

Quality of Service (QoS)

Priority Queues: 4 queues per port

Traffic classification based on IEEE 802.1p CoS, DSCP, WRR and strict mode

Rate Limiting (Ingress/Egress)

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 Protocols
IEEE 802.1D STP
IEEE 802.1w RSTP
IEEE 802.1s MSTP
EtherWAN's Alpha-Ring network fault recovery (<15ms)

VLANs
IEEE 802.1Q Tag VLANs
GVRP
GMRP

Link Aggregation
Static Trunk (4 groups, support MAC base)
IEEE 802.3ad LACP

IGMP Snooping v1/v2/v3

Layer 3 Features

IP Packet Routing
Maximum number of routes in hardware: 64 entries
Static Routing
RIP v1/v2
OSPF v2

Routing Redundancy
VRRP

Specifications

Interface

Ethernet

8 or 12 (8 PoE) x 10/100/1000BASE-T(X)

4 x 1000BASE SX/LX/SFP

Console

1 x DB9 RS-232

Alarm Contact

1 x Relay output, current capacity 0.5A/48VDC

LED Indicators

Per Unit: Power 1, Power 2

Per Port: Link/Activity (Green)

Per PoE Port: PoE Status (Orange)

Technology

Standards

IEEE 802.3 10BASE-T

IEEE 802.3u 100BASE-TX/100BASE-FX

IEEE 802.3ab 1000BASE-T

IEEE 802.3z 1000BASE-SX/1000BASE-LX

IEEE 802.3x Full duplex and flow control

IEEE 802.1p QoS

IEEE 802.1Q Tag VLANs

IEEE 802.1w RSTP

IEEE 802.1x PNAC

IEEE 802.3af/at Power over Ethernet

Forward/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

Jumbo Frame
9216 bytes

Address Table Size
16K MAC Addresses

Power

Input
52-57VDC Redundant (Terminal block)

Power Consumption
20W Max (without PoE)

PoE Technology
Alternative A & B
Pins 1/2(+), 3/6(-), Pins 7/8(-), 4/5(+)

PoE Power Output
PoE can be configured as:
1. 6-port 15.4W PoE and 2-port 60W PoE
2. 8-port 30W PoE
3. 4-port 10/100/1000-TX and 4-port 60W PoE
4. Other PoE power level configuration can be done through firmware
Power Budget: 240W

Protection
Reverse Polarity Protection

Physical

Casing Material
Aluminum

IP Rating
IP30

Dimensions
72 x 140 x 170mm (W x D x H)
2.8" x 5.5" x 6.7"

Weight
1.5kg (3.3lbs)

Installation Type
DIN-rail mounting

Environmental

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

Storage Temp.
-45 to 85°C (-49 to 185°F)

Relative Humidity
5% to 95% (non-condensing)

Regulatory

ISO
Manufactured in ISO-9001 facility

EMI
FCC Part 15B Class A
VCCI Class A
EN 61000-6-4
EN 61000-3-2
EN 61000-3-3

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)

Vibration

IEC 60068-2-6 Fc

Shock

IEC 60068-2-27 Ea

Free Fall

FED STD 101C Method 5007.1

Warranty

Length

Limited Lifetime

Details

www.etherwan.com/support/warranty-policy

What's Included

Device

Ethernet Switch

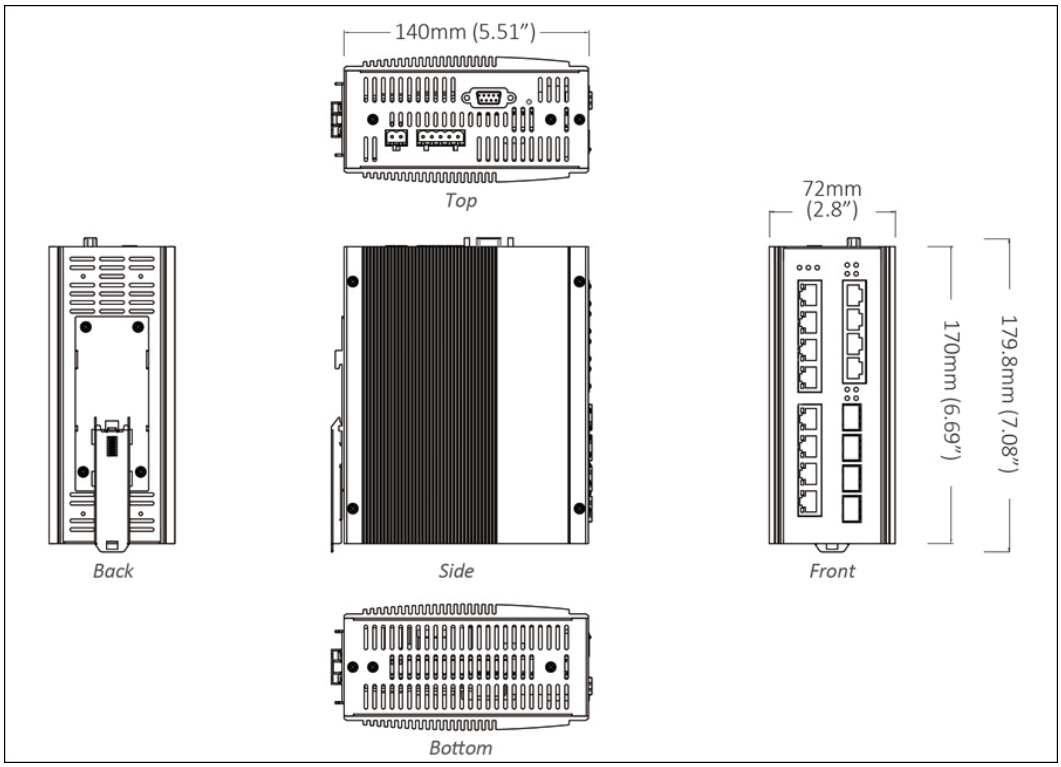
Cables

1 Console Cable

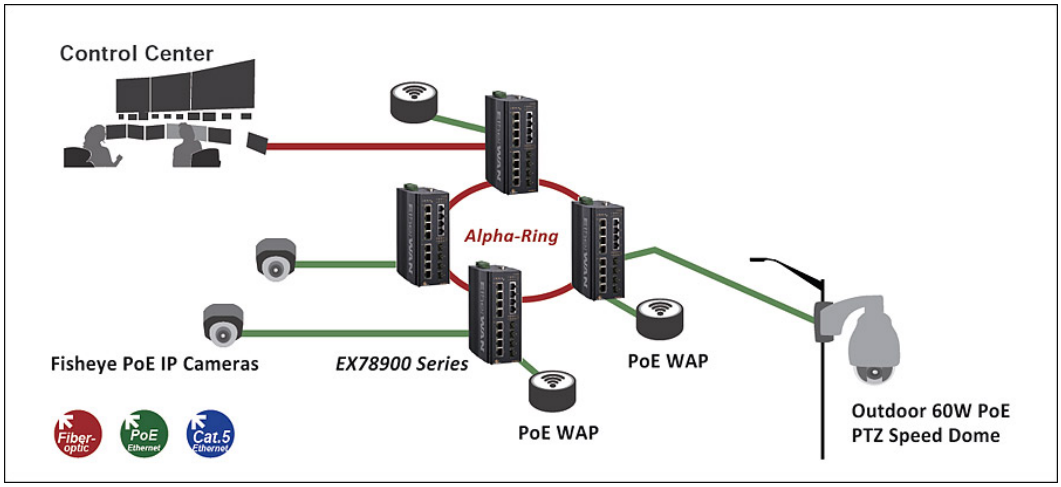
Documentation

Quick Install Guide

Dimensions

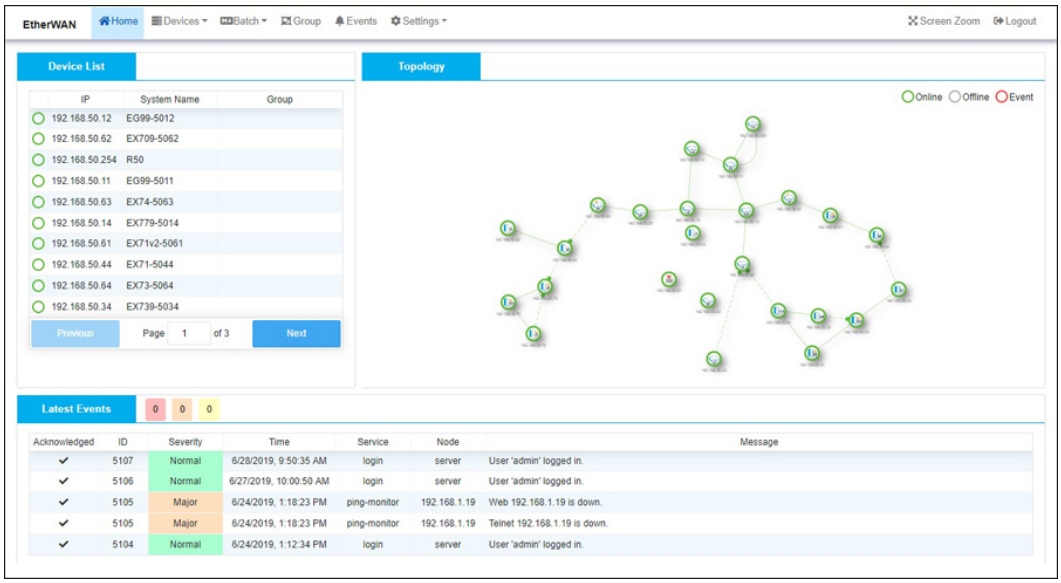


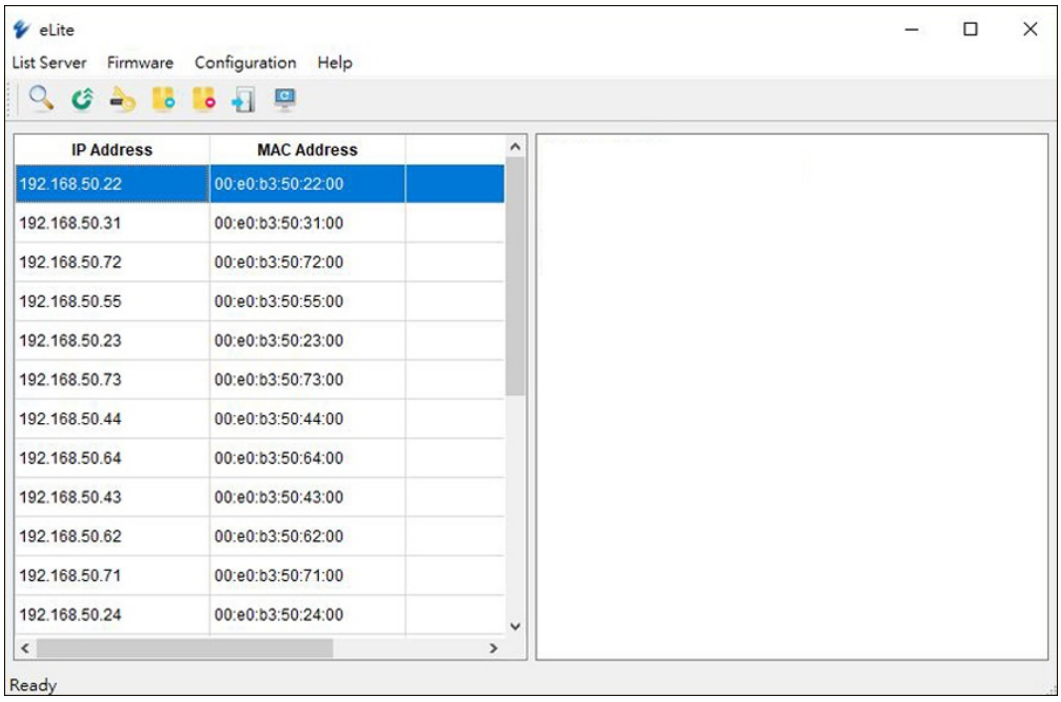
Application



Software

Network Management	eVue™ Network Configuration and Monitoring Tool
Network Discovery	eLite™ Network Discovery and IP Configuration Tool





Ordering Info

Model - Buy Now

EX78931-0VB	12-Port 10/100/1000BASE-TX with 8-port PoE + 4-port Gigabit SFP
EX78921-0VB	8-Port 10/100/1000BASE-TX PoE + 4-Port Gigabit SFP
EX78921-0XB	8-Port 10/100/1000BASE-TX PoE + 4-Port Gigabit Fiber

* DIN-Rail mounting kit included.

Gigabit Port Options (X)

3	1000BASE-SX (SC) - 550m
4	1000BASE-SX (SC) - 2Km
5	1000BASE-SX (ST) - 550m
A	1000BASE-LX (SC) - 10Km
B	1000BASE-LX (SC) - 20Km
R	1000BASE-BX (SC) WDM-TX: 1310nm/RX: 1550nm-20Km
S	1000BASE-BX (SC) WDM-TX: 1550nm/RX: 1310nm-20Km

* More Gigabit options also available upon request.

Accessories

Hardened Gigabit SFP Modules	www.etherwan.com/products/sfp-fiber-transceiver
DIN-Rail Power Supplies	EPOW-54-600
***Recommended Power Supply**	EPOW-54-600
EB-232	Configuration Backup and Restoration Tool

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