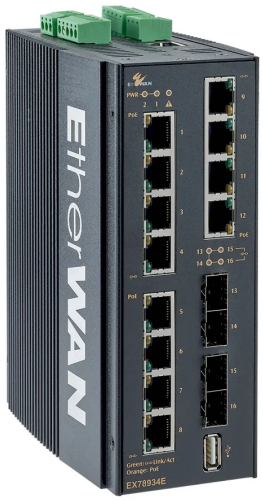
EX78900E シリーズ

広範囲動作温度対応産業用/管理型 8/12ポート 10/100/1000BASE-T(X) +2/4ポート 100/1000BASE SFP PoE ギガビット イーサネットスイッチ



概要

EtherWANのEX78900EシリーズはDINレールに取り付けられた産業用マネージドPoEイーサネットスイッチです。最大12ギガビットPoEポート、60 W電力およびIEEE 802.3.btプロトコルサポート、4つのデュアルレートギガビットSFPポートを備えたEX78900Eシリーズは、都市インフラ、交通、セキュリティなどのネットワークに柔軟性と信頼性を提供します。

IEC 62443-4-2認証 — 重要な産業及びインフラ用途におけるサイバーレジリエンスと運用信頼性を向上させます。

EtherWAN — "When Connectivity is Crucial."

特長

High Bandwidth and Versatility

8 or 12 10/100/1000BASE-T(X) ports for High bandwidth connections

Up to 4 Dual-rate 100/1000BASE SFP uplink ports for fiber connections

Full capacity switching running at full duplex

PoE Features

IEEE 802.3bt with 60W; 240W Power budget

PoE watchdog monitors status of connected PoE devices

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

Management/Security Features

Port control, SFTP

802.1x port-based network access control and remote authentication through RADIUS and TACACS+

Configure and monitor with eVue™ and eLite™

Lite Layer 3 Functionality

Static routing, RIP v1/v2, and OSPF

Redundancy with VRRP

Reduces amount of broadcast traffic

Support

Complimentary technical support

Free firmware upgrades and notifications

Limited lifetime warranty

機能

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
Modbus TCP

Security

MAC Address filtering
Enable/Disable port
Storm control
System logging
IEEE 802.1x LAN Access control
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)
IPSG (IP Source guard)
DAI (Dynamic ARP Inspection)
DHCP Snooping

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
EtherWAN's Alpha-Ring network fault recovery

VLANs
IEEE 802.1Q Tag VLANs
GVRP
GMRP

Link Aggregation
Static Trunk (4 groups)
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

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)

Software Properties and Performance

Switching Fabric

32Gbps

Forwarding Rate

23.5Mpps

Max VLANs

256 (4096 VID)

Jumbo Frame Size

9KB

MAC Table Size

16K

Packet Buffer Memory

12M bits

仕様

Interface

Ethernet

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

2 or 4 x 100/1000BASE SFP

Console

1 x RJ45

Config Backup

1 x USB (Type A Connector)

Digital Input

2 x Digital Input

Wet Contact: 0-3V for State 0; 13-30V for State 1; Max Input Current: 8mA

Dry Contact: Logic Level 1–Close to GND; Logic Level 0-Open

Alarm Contact

2 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)

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)

Storage Temp.

-45 to 85°C (-49 to 185°F)

Relative Humidity

5% to 95% (non-condensing)

MTBF

1,108,382 hours

Technology

Standards

IEEE 802.3 10BASE-T

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 802.3x 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

IEEE 802.3az EEE

IEEE 802.3af/at/bt Power over Ethernet

IEEE 1588v2 PTP

Forward/Filtering Rate

14,880pps for 10Mbps

148,810pps for 100Mbps

1,488,100pps for 1000Mbps

Processing Type

Store-and-forward

Auto-negotiation

Half-duplex back-pressure and full-duplex flow control

Auto MDI/MDIX

System Memory

2Gb DDR3 SDRAM

Flash Storage

1Gb

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

BSMI

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)

PoE Ports: line to earth 6kV Surge

EN 61000-4-6 (Induced RFI)

EN 61000-4-8 (Magnetic field)

Safety

UL 61010

Cybersecurity

IEC 62443-4-1

IEC 62443-4-2

Traffic

NEMA TS2

Railway

EN 50121-4

Vibration

IEC 60068-2-6

Shock

IEC 60068-2-27

Free Fall

FED STD 101C Method 5007.1

Power

Input

46-57VDC Redundant (Terminal block)**
** 46-57VDC for IEEE 802.3af type 1, ≤15.4W PD devices.
52-57VDC for IEEE 802.3at/bt type 2/3, 30W, 60W PD devices.

Power Consumption

20W Max (without PoE)

PoE Modes

802.3af/at Mode A: Pins 1/2(-), 3/6(+)

802.3bt (60W): Mode A & B, Pins 1/2(-), 3/6(+), 4/5(+), 7/8(-)

PoE Power Output

Ports 1-4, 9-12: Up to 30W/port

Ports 5-8: Up to 60W/port

Power Budget: 240W

Protection

Reverse Polarity Protection

What's Included

Device

Ethernet Switch

Cables

1 Console Cable

Installation

Mounting brackets, screws

Documentation

Quick Install Guide

Warranty

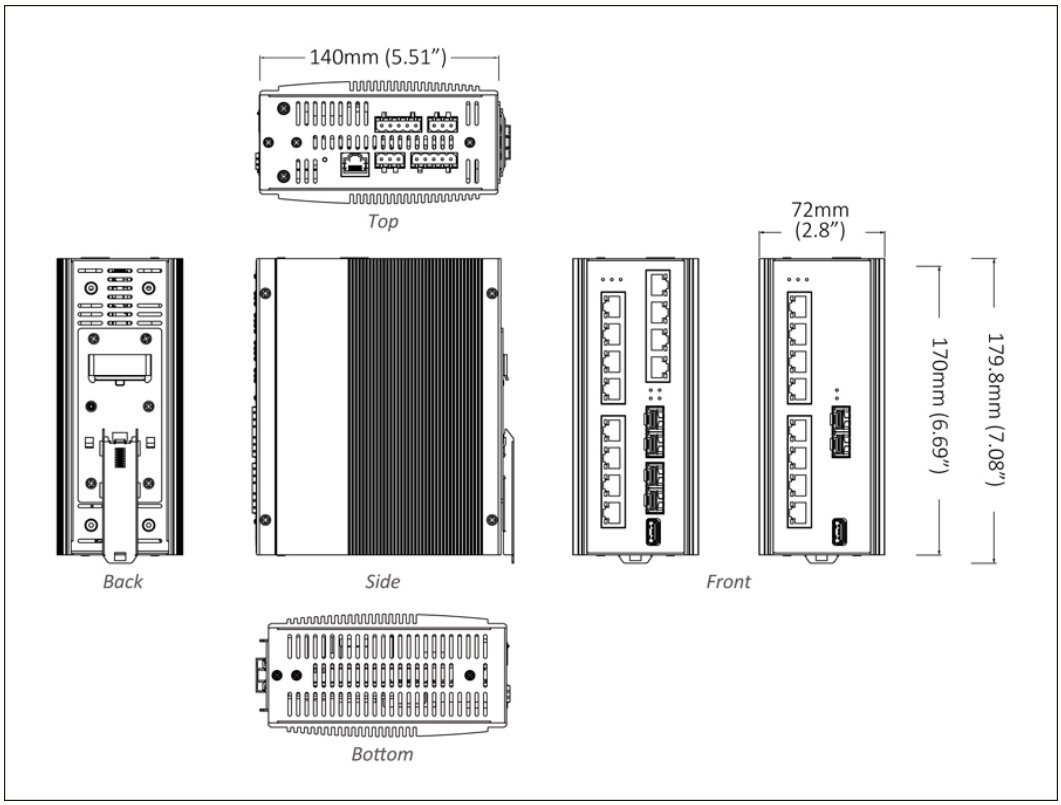
Length

Limited Lifetime

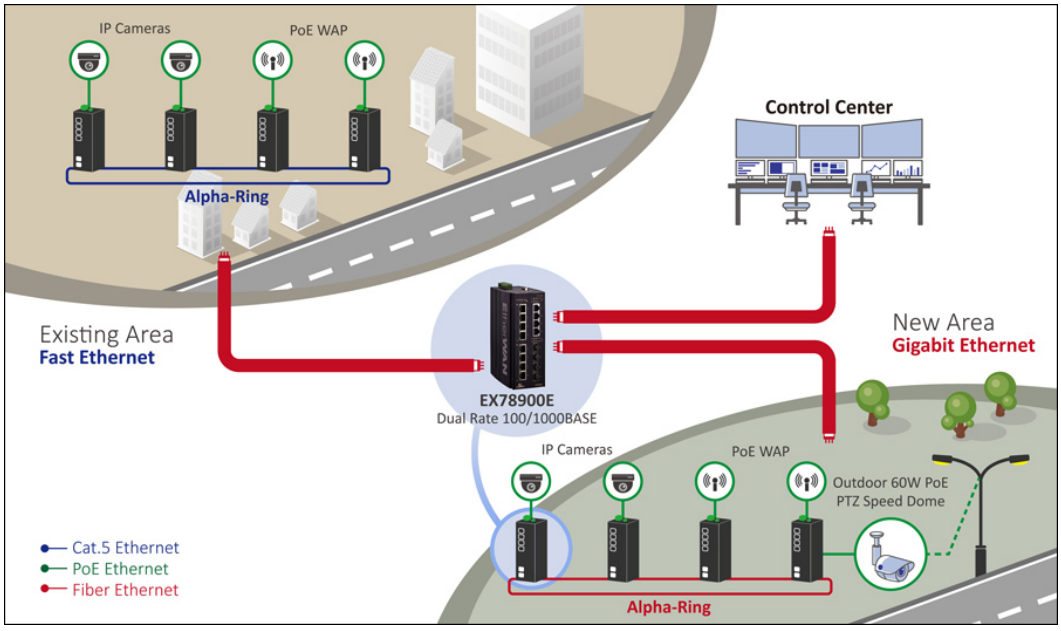
Details

www.etherwan.com/support/warranty-policy

寸法図

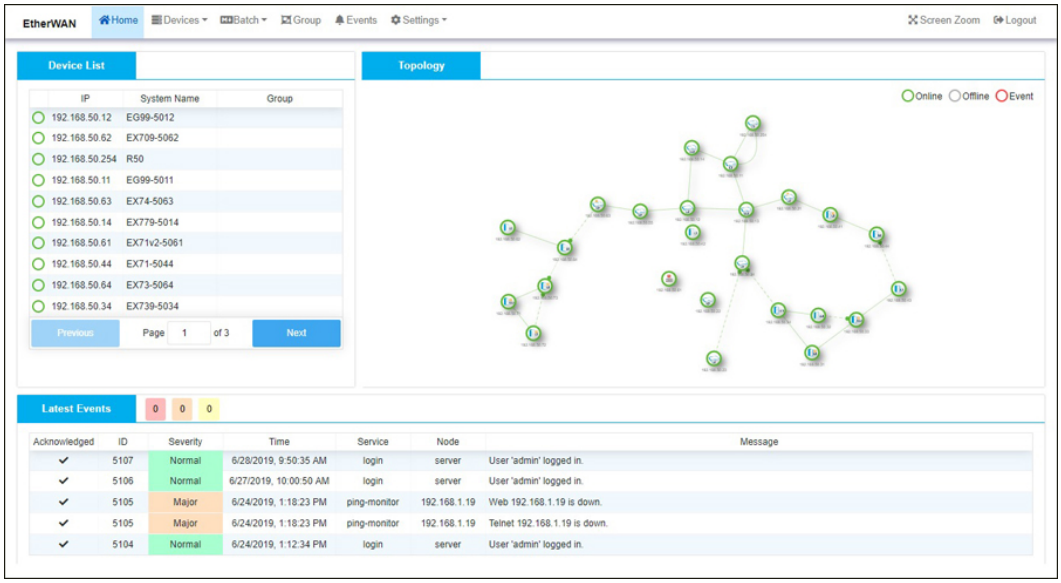

140mm (5.51")
Top
72mm
(2.8")
170mm (6.69")
179.8mm (7.08")
Back
Side
Front
Bottom

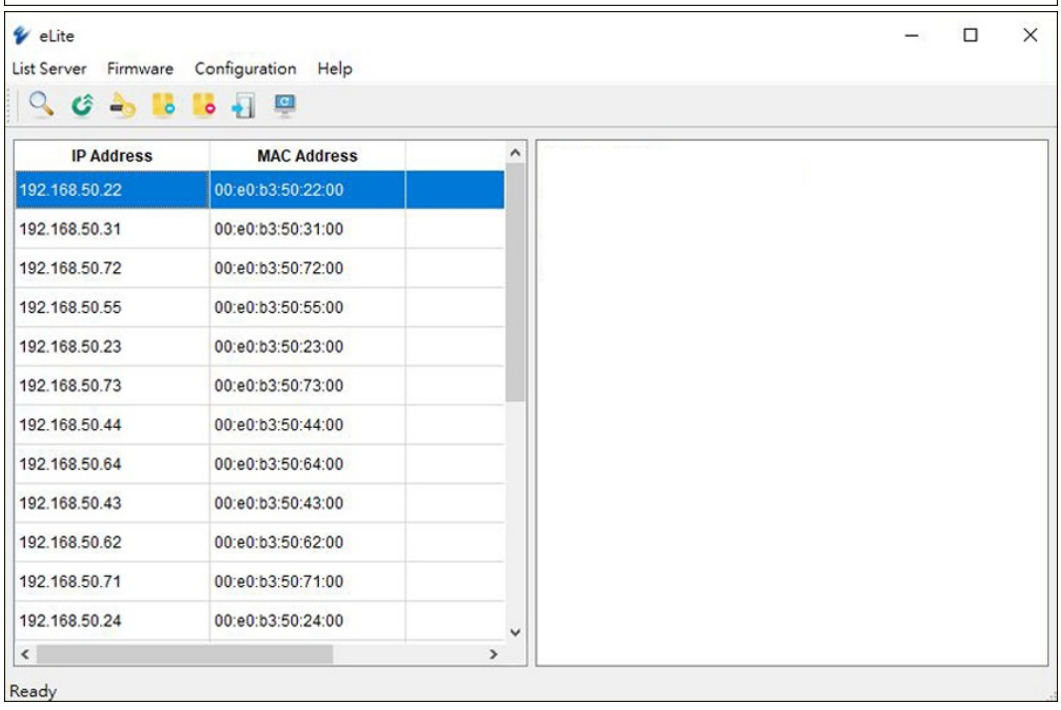
応用例


IP Cameras
PoE WAP
Alpha-Ring
Control Center
Existing Area
Fast Ethernet
New Area
Gigabit Ethernet
EX78900E
Dual Rate 100/1000BASE
IP Cameras
PoE WAP
Outdoor 60W PoE
PTZ Speed Dome
Cat.5 Ethernet
PoE Ethernet
Fiber Ethernet
Alpha-Ring

ソフトウェア

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





製品型番

Model

			
	EX78934E-0VB	**EX78924E-0VB**	**EX78922E-0VB**
10/100/1000BASE TX	12	8	8
100/1000 BASE SFP	4	4	2
supports PoE++	12	8	8
PoE per port	最大60W		
	お問い合わせ	お問い合わせ	お問い合わせ

Accessories

Hardened 100BASE SFP Modules	www.etherwan.com/products/sfp-fiber-transceiver
Hardened Gigabit SFP Modules	www.etherwan.com/products/sfp-fiber-transceiver
DIN-Rail Power Supplies	www.etherwan.com/products/din-rail-power-supply (*)
***Recommended Power Supply**	NDR-480-48 480W 48VDC DIN-Rail Power Supply

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