

EX73900X シリーズ

広範囲動作温度対応産業用/管理型 12ポートギガビット +4ポート10G SFP+ イーサネットスイッチ



概要

EtherWANのEX73900Xシリーズは、堅牢なDINレールマウント型のマネージドイーサネットスイッチプラットフォームです。EX73900Xシリーズは、最大12ギガビットイーサネットと4デュアルレート10ギガビットSFP+ポートを備えており、都市インフラストラクチャ、輸送、セキュリティ、変電所など、接続性が重要な分野のネットワークをサポートする柔軟性、速度、と信頼性を提供します。

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 1/10G SFP+ uplink ports for 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

+ Lite Layer 3 Functionality

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

+ Compliance

IEC 61850-3/IEEE 1613 certified for power substation
NEMA TS2 rated
UL certified for safety

+ Management/Security Features

Port control, SFTP
Dying gasp feature provides SNMP trap upon power off
Configure and monitor with eVue™ and eLite™

+ Support

Complimentary Technical Support
Free Firmware Upgrades
Limited Lifetime Warranty

機能

+ Interface

CLI, Telnet, Web GUI, SSH

+ Management

Firmware upgrade
SFTP (Secured FTP) support
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
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
TLS and HTTPS for Web security
ACL (Access Control List, up to 4096 entries)
Storm Detection Support
Modbus TCP

+ 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 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

+ Software Properties and Performance

Switching Fabric
104Gbps

Forwarding Rate
75.29Mpps

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 1/10G 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; 0.6A/30VDC

LED Indicators

Per Unit: Power 1, Power 2, Alarm

Per Port: Link/Activity

+ 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 1588v2 PTP

Forward/Filtering Rate

14,880pps for 10Mbps

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 full duplex flow

control
Auto MDI/MDIX

System Memory
2Gb DDR3 SDRAM

Flash Storage
1Gb

+ Power

Input
12-48VDC Redundant (Terminal block)

Power Consumption
20W Max

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
1.4kg (3.08lbs)

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)

+ 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)

Safety
UL 61010

Traffic
NEMA TS2

Rail
EN 50121-4

Power Substation
IEC 61850-3/IEEE 1613

Vibration
IEC 60068-2-6

Shock
IEC 60068-2-27

Free Fall
FED STD 101C Method 5007.1

+ Warranty

Length
Limited Lifetime

Details
www.etherwan.com/support/warranty-policy

+ What's Included

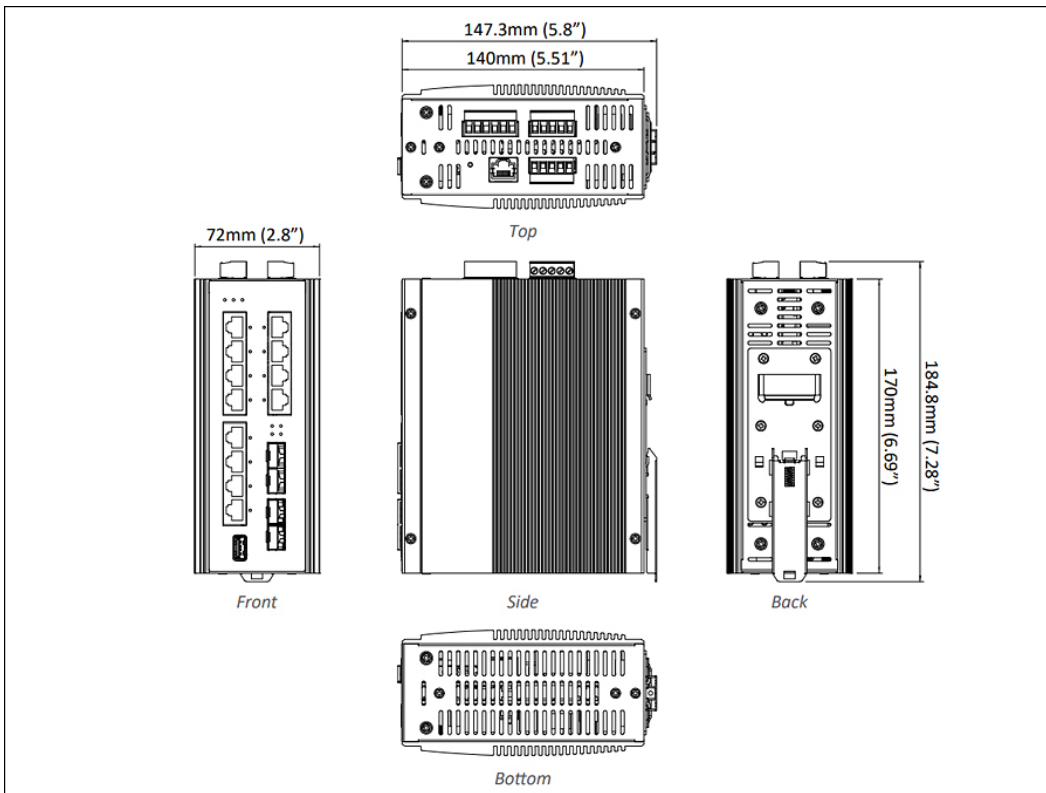
Device
Ethernet switch

Cables
1 Console cable

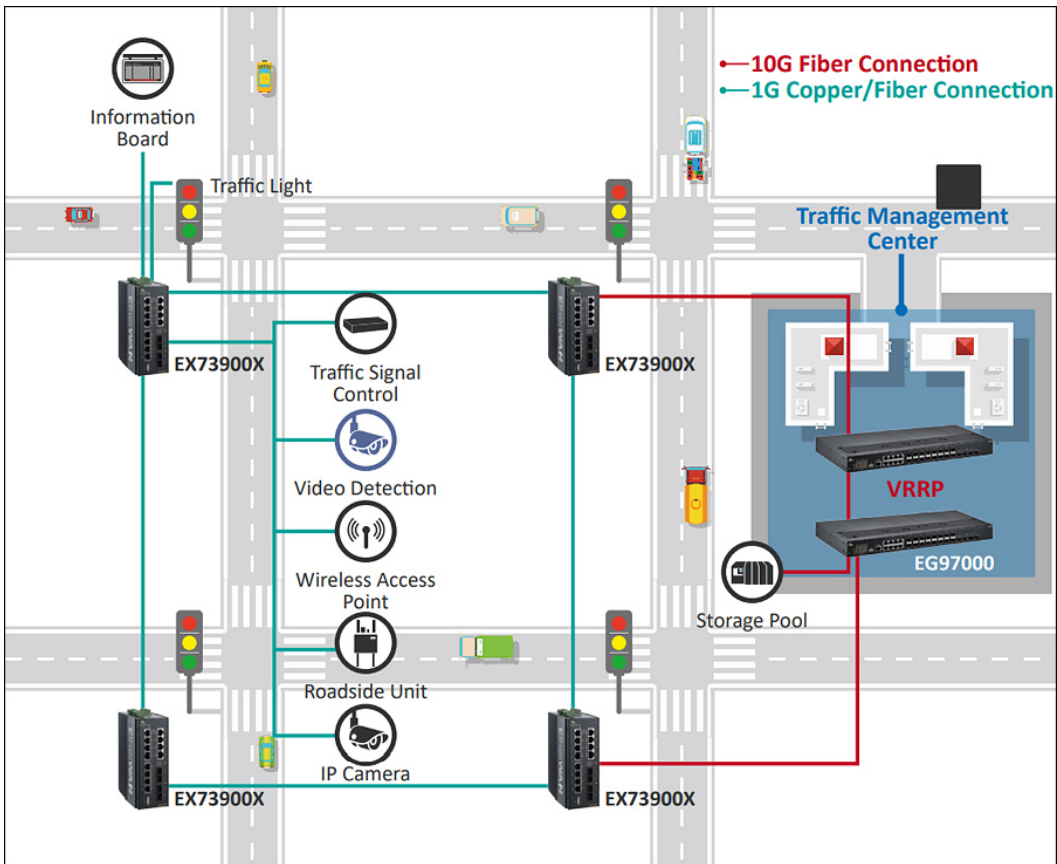
Installation
Mounting brackets, screws

Documentation
Quick install guide

寸法図

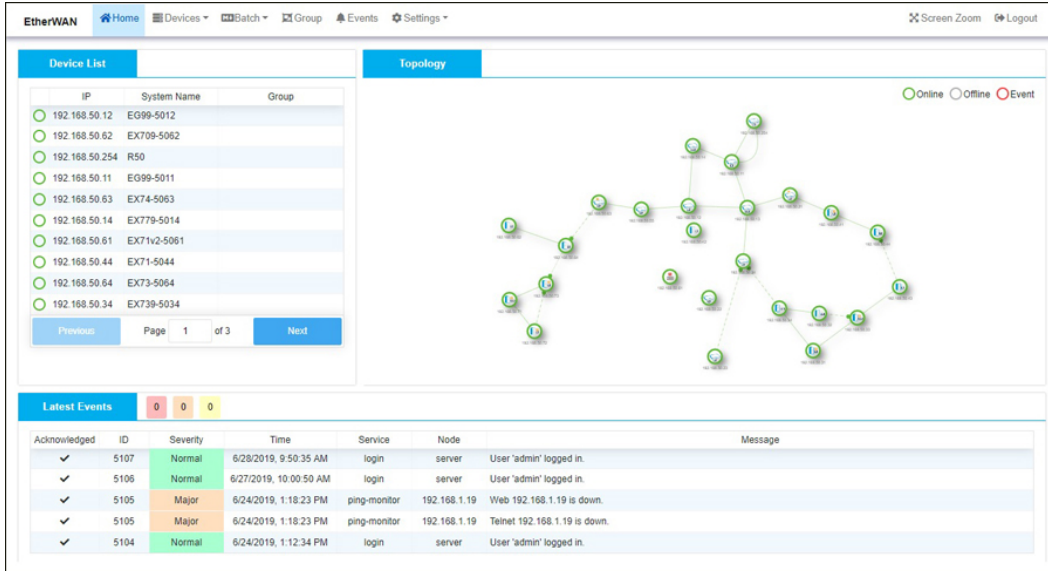


応用例



ソフトウェア

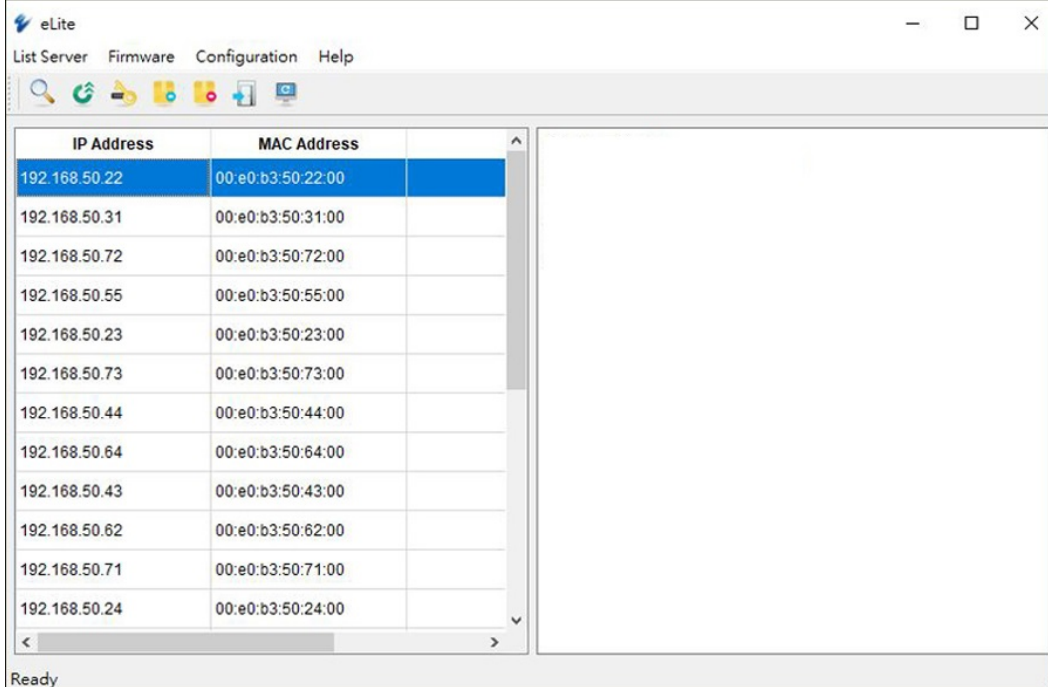
Network Management [eVue™ Network Configuration and Monitoring Tool](#)
 Network Discovery [eLite™ Network Discovery and IP Configuration Tool](#)



The screenshot shows the EtherWAN web interface. On the left, there is a 'Device List' table with columns for IP, System Name, and Group. On the right, there is a 'Topology' diagram showing a network of interconnected devices. Below these, there is a 'Latest Events' section with a table of system events.

| IP | System Name | Group |
|----------------|-------------|-------|
| 192.168.50.12 | EG99-5012 | |
| 192.168.50.62 | EX709-5062 | |
| 192.168.50.254 | R50 | |
| 192.168.50.11 | EG99-5011 | |
| 192.168.50.63 | EX74-5063 | |
| 192.168.50.14 | EX779-5014 | |
| 192.168.50.61 | EX71v2-5061 | |
| 192.168.50.44 | EX71-5044 | |
| 192.168.50.64 | EX73-5064 | |
| 192.168.50.34 | EX739-5034 | |

| Acknowledged | ID | Severity | Time | Service | Node | Message |
|--------------|------|----------|------------------------|--------------|--------------|------------------------------|
| ✓ | 5107 | Normal | 6/28/2019, 9:50:35 AM | login | server | User 'admin' logged in. |
| ✓ | 5106 | Normal | 6/27/2019, 10:00:50 AM | login | server | User 'admin' logged in. |
| ✓ | 5105 | Major | 6/24/2019, 1:18:23 PM | ping-monitor | 192.168.1.19 | Web 192.168.1.19 is down. |
| ✓ | 5105 | Major | 6/24/2019, 1:18:23 PM | ping-monitor | 192.168.1.19 | Telnet 192.168.1.19 is down. |
| ✓ | 5104 | Normal | 6/24/2019, 1:12:34 PM | login | server | User 'admin' logged in. |



The screenshot shows the eLite application window. It has a menu bar with 'List Server', 'Firmware', 'Configuration', and 'Help'. Below the menu is a toolbar with various icons. The main area contains a table with IP addresses and MAC addresses.

| IP Address | MAC Address |
|---------------|-------------------|
| 192.168.50.22 | 00:e0:b3:50:22:00 |
| 192.168.50.31 | 00:e0:b3:50:31:00 |
| 192.168.50.72 | 00:e0:b3:50:72:00 |
| 192.168.50.55 | 00:e0:b3:50:55:00 |
| 192.168.50.23 | 00:e0:b3:50:23:00 |
| 192.168.50.73 | 00:e0:b3:50:73:00 |
| 192.168.50.44 | 00:e0:b3:50:44:00 |
| 192.168.50.64 | 00:e0:b3:50:64:00 |
| 192.168.50.43 | 00:e0:b3:50:43:00 |
| 192.168.50.62 | 00:e0:b3:50:62:00 |
| 192.168.50.71 | 00:e0:b3:50:71:00 |
| 192.168.50.24 | 00:e0:b3:50:24:00 |

製品型番

+ Model

EX73934X-0VB 12-port 10/100/1000BASE-T(X) + 4-port 1/10G SFP+

EX73924X-0VB 8-port 10/100/1000BASE-T(X) + 4-port 1/10G SFP+

EX73922X-0VB 8-port 10/100/1000BASE-T(X) + 2-port 1/10G SFP+

+ Accessories

Hardened Gigabit & 10 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 EX41-145046 Power Supply 45W 12VDC with Open Wire

