

EX73900 シリーズ

IEC 61850-3/IEEE 1613 Lite L3 広範囲動作温度対応/管理型 16ポート ギガビット イーサネット スイッチ



概要

なぜ産業用レイヤ3スイッチは必要がありますか。

EtherWAN の EX73900 シリーズは広範囲動作温度対応、DINレール型、最大16ポート運用が可能なイーサネット スイッチで、安定した通信が必要不可欠な過酷な環境にも対応する堅牢な管理機能を備えたハイパフォーマンスな製品です。

EX73900 シリーズは 10/100/1000BASE-TX 12ポートまで装備でき、またギガビット光ポート4個を選択できます。EX73900 シリーズは リング構成の1ルートが遮断されても 15ms 以内で自動復帰する Alpha-Ring という独自リングプロトコルを搭載していて、高度な接続信頼性が必要な環境に柔軟に対応します。ポート セキュリティや IGMP、VLAN、GARP プロトコル、LACP、ACLなどの管理機能はブラウザ経由で設定可能です。Telnet、SSH、SNMP、RMON、TFTP、RS-232 コンソール接続などにも対応します。

過酷な環境向けに設計され、動作温度は -40~75°C と広範囲温度に対応した上、IEC 61850 & IEEE 1613 準拠し、high EMI の環境での稼動に最適な選択です。

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 gigabit fiber connections
- Full capacity switching running at full duplex

+ Compliance

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

+ 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
- RADIUS remote authentication
- 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
- Limited Lifetime Warranty

機能

+ Interface

CLI, Telnet, Web Browser
SNMP v1/v2c/v3

+ Management

Firmware upgrade
Configuration 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 (Access Control List, up to 4096 entries)

+ 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

VLANs

IEEE 802.1Q Tag VLANs (128 groups, 4096 VID)
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

仕様

+ Interface

Ethernet

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

Console

1 x DB9 RS-232

Alarm Contact

1 x Relay output, current capacity 0.6A/30VDC

LED Indicators

Per Unit: Power 1, Power 2
Per Port: Link/Activity (Green)

+ 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

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

Address Table Size

16K MAC Addresses

+ 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)

Safety

UL 61010

Vibration

IEC 60068-2-6 Fc

Shock

IEC 60068-2-27 Ea

Free Fall

FED STD 101C Method 5007.1

Industrial Compliance

IEC 61850-3/IEEE 1613
NEMA TS2

+ Power

Input

12-48VDC Redundant (Terminal block)

Power Consumption

17.28W Max. 1.44A@12VDC, 0.72A@24VDC

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 (3.09lbs)

Installation Type

DIN-rail mounting

+ Warranty

Length

Limited Lifetime

Details

www.etherwan.com/support/warranty-policy

+ What's Included

Device

Ethernet Switch

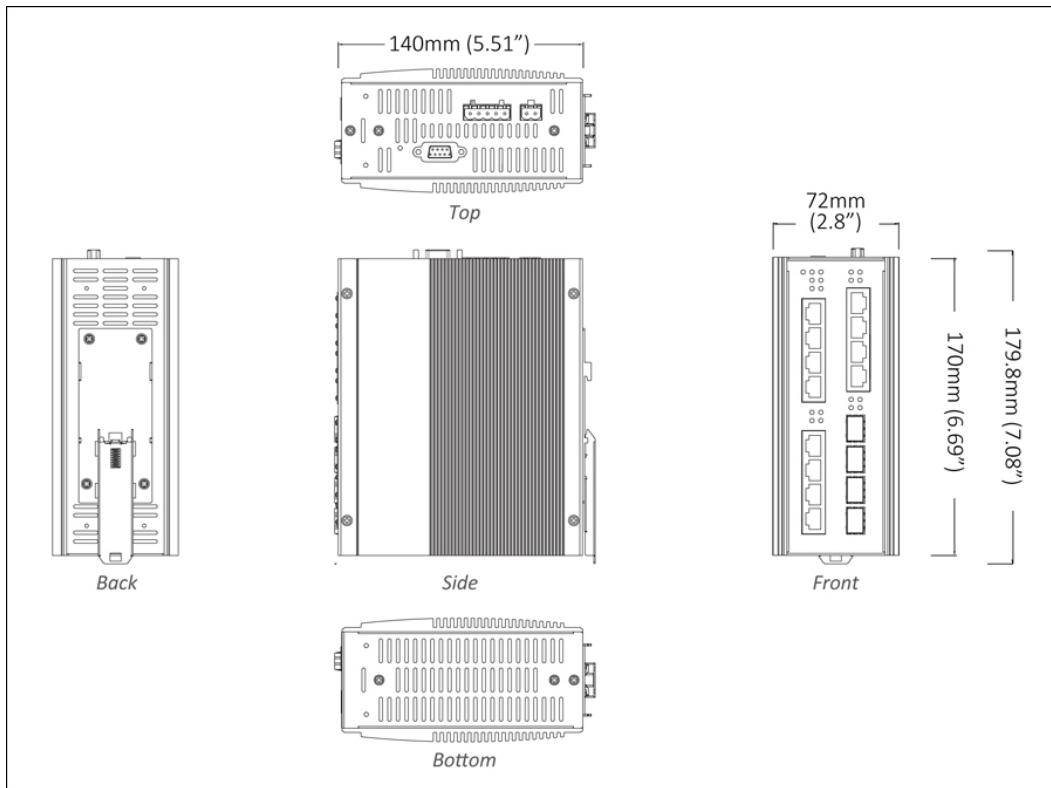
Cables

1 Console Cable

Documentation

Quick Install Guide

寸法図



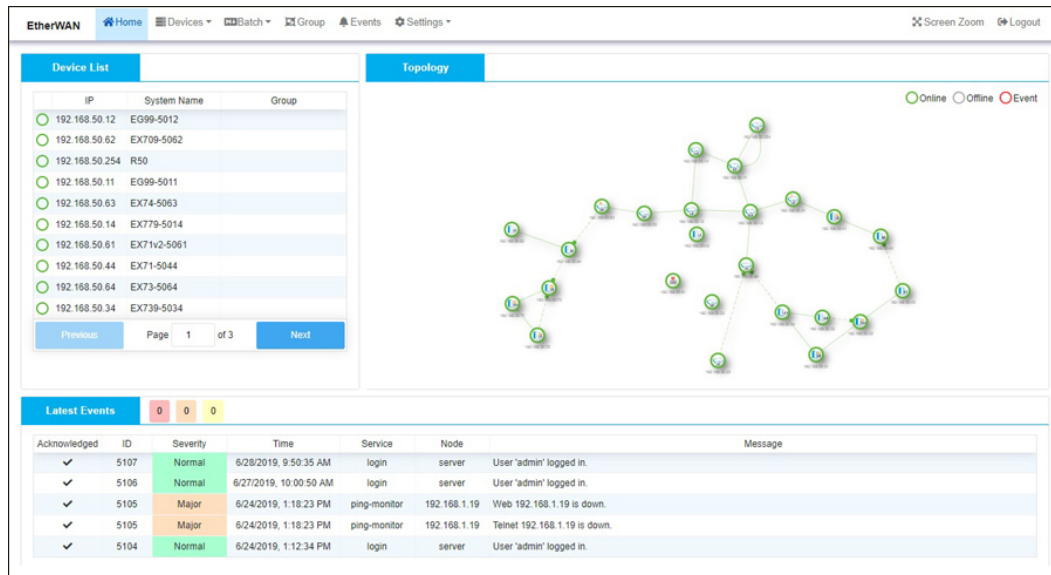
ソフトウェア

Network Management

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

Network Discovery

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



Device List

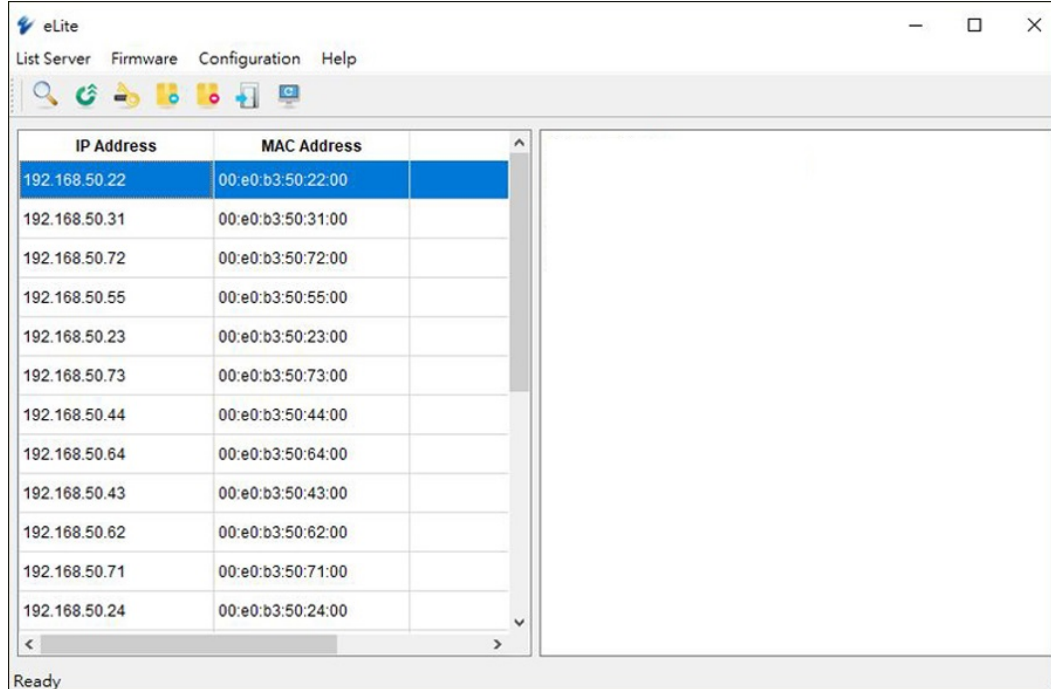
IP	System Name	Group
192.168.50.12	EG99-5012	
192.168.50.62	EX709-5062	
192.168.50.254	R50	
192.168.50.11	EG99-5011	
192.168.50.63	EX74-5063	
192.168.50.14	EX779-5014	
192.168.50.61	EX71v2-5061	
192.168.50.44	EX71-5044	
192.168.50.64	EX73-5064	
192.168.50.34	EX739-5034	

Topology

Legend: ● Online ○ Offline ○ Event

Latest Events

Acknowledged	ID	Severity	Time	Service	Node	Message
✓	5107	Normal	6/29/2019, 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.



eLite

List Server Firmware Configuration Help

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

Ready

製品型番

+ Model

EX73931-0VB	12-Port 10/100/1000BASE-TX + 4-port Gigabit SFP
EX73921-0VB	8-Port 10/100/1000BASE-TX + 4-Port Gigabit SFP

* DIN-Rail mounting kit included.

* [EX73921-0XB EOL Notice](#)

Accessories

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 HDR-30-24 30W 24VDC DIN-Rail Power Supply

