

EX71000 シリーズ

広範囲動作温度対応産業用/管理型 8ポート 10/100BASE +2ポート ギガビット 光オプションイーサネット スイッチ



特長

+ 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

+ Compliance

EN 50121-4 certified for railway applications
NEMA TS2 rated
UL certified for safety

+ Management/Security Features

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

+ Support

Complimentary Technical Support
Free Firmware Upgrades
Limited Lifetime Warranty

概要

EtherWANのEX71000は8個の10/100BASEポートと2個のギガ光ポートを装備し、SX/LX/BX/WDM光ポートとSFPも選択できる産業用イーサネットスイッチです。

冗長化機能(STP/RSTP/MSTP)に対応し、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EtherWAN独自リングプロトコルを搭載。IPv4/IPv6プロトコルやポートセキュリティ、IGMPスヌーピング、VLANs、GARPプロトコルとLACPなどの管理機能をブラウザ経由で設定可能。

Telnet、SNMP、RMON、TFTP、RS-232コンソールなどにも接続できます。EX71000シリーズは堅牢で広温度範囲(-40~70°C)に対応し、過酷な環境でのご使用に最適な選択です。

EtherWAN — "When Connectivity is Crucial."

機能

+ Interface

CLI, Telnet, Web GUI
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)
Multi-level user account/password against unauthorized configuration

+ 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
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

Port-based VLANs
IEEE 802.1Q Tag VLANs (128 groups, 4096 VID)
GVRP
GMRP

Link Aggregation

Static Trunk (2 groups, support MAC base)
IEEE 802.3ad LACP

IGMP Snooping v1/v2/v3

仕様

+ Interface

Ethernet

4, 6 or 8 x 10/100BASE-T(X)

0 or 4 x 100BASE-FX

0, 1 or 2 x Gigabit

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, Alarm

Per Port: Link/Activity, Speed

+ 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

+ Power

Input

12-48VDC Redundant (Terminal block)

Power Consumption

7.5W Max. 0.31A@24VDC

Protection
Reverse Polarity Protection

+ Physical

Casing Material
Aluminum

IP Rating
IP30

Dimensions
60 x 125 x 145mm (W x D x H)
2.36" x 4.92" x 5.7"

Weight
1.05kg

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
EN 55032
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
ISA 12.12.01

Vibration
IEC 60068-2-6 Fc

Shock
IEC 60068-2-27 Ea

Free Fall
FED STD 101C Method 5007.1

Industrial Compliance
NEMA TS2
EN 50121-4

+ Warranty

Length
Limited Lifetime

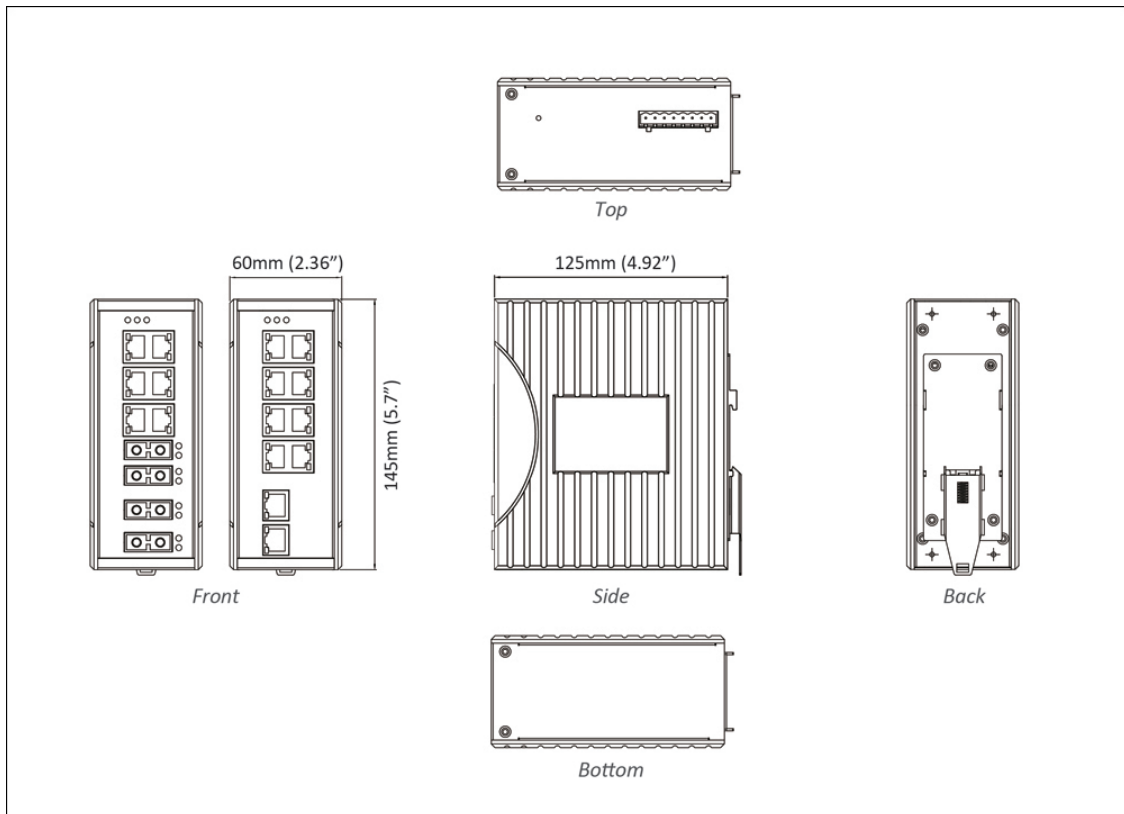
Details
www.etherwan.com/support/warranty-policy

+ What's Included

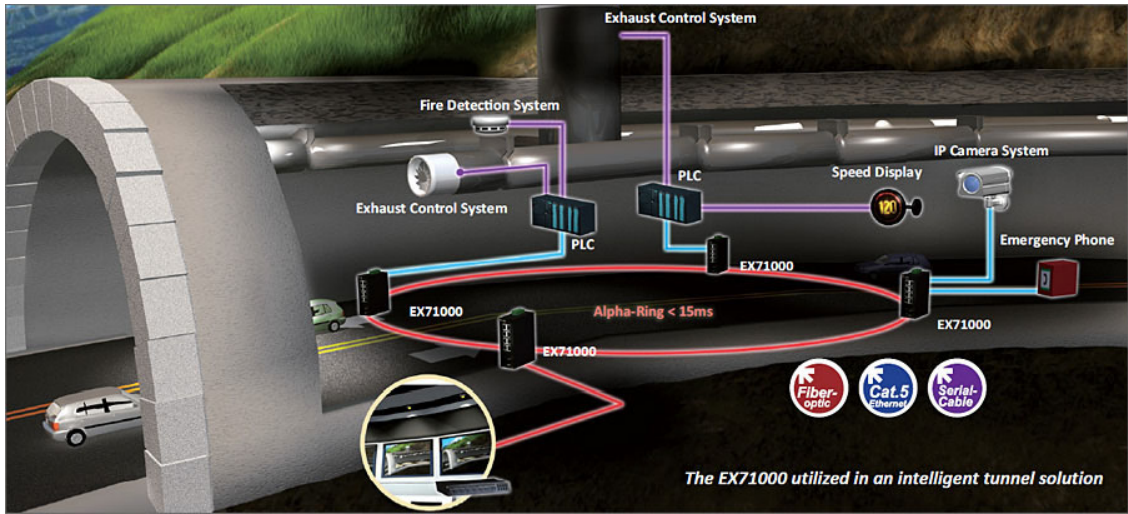
Device
Ethernet Switch

Cables
1 Console Cable
Documentation
Quick Install Guide

寸法図

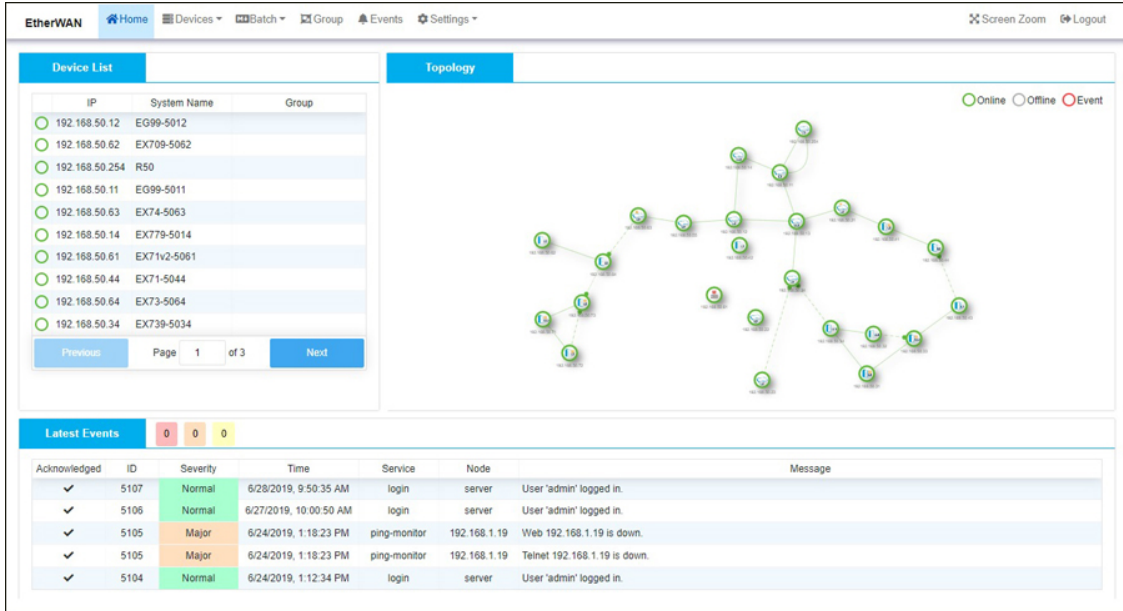


応用例



ソフトウェア

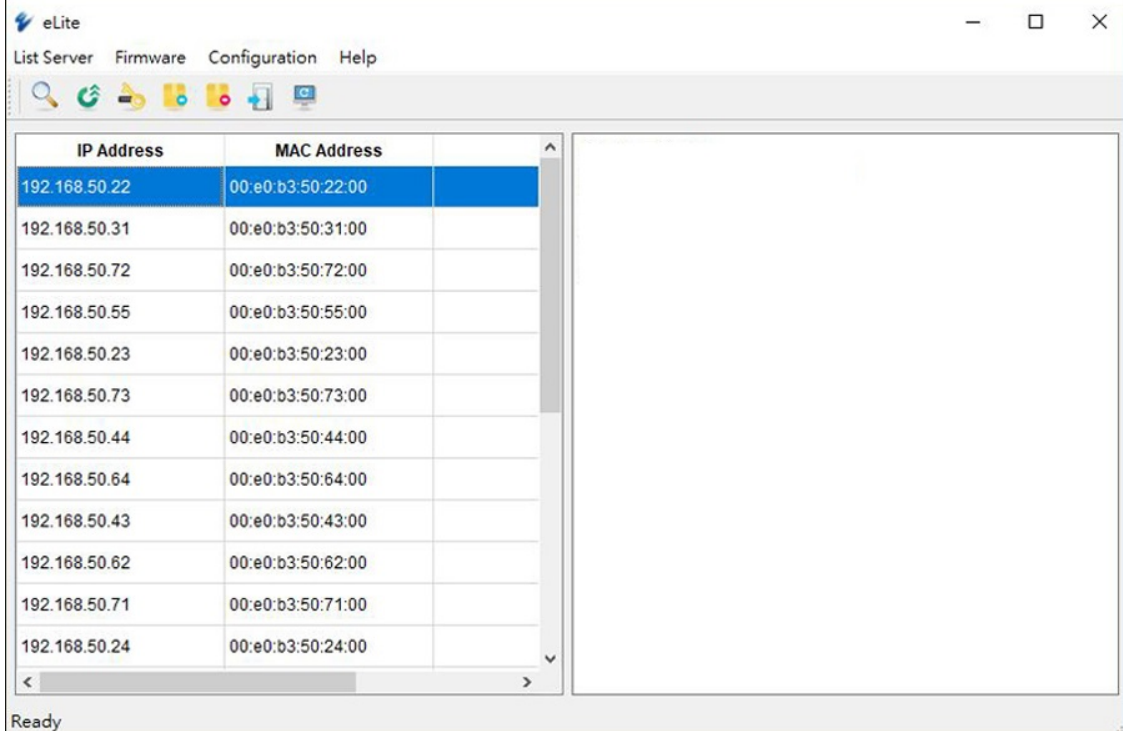
Network Management [eVue™ Network Configuration and Monitoring Tool](#)
 Network Discovery [eLite™ Network Discovery and IP Configuration Tool](#)



The screenshot shows the EtherWAN web interface. On the left, there is a 'Device List' table with columns for IP, System Name, and Group. The table contains 12 entries, all with green status indicators. On the right, there is a 'Topology' diagram showing a network of interconnected nodes, some green (Online) and some grey (Offline). Below these, there is a 'Latest Events' section with a table of recent 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 web interface. It features a menu bar with 'List Server', 'Firmware', 'Configuration', and 'Help'. Below the menu is a toolbar with various icons. The main content area displays a table with two columns: 'IP Address' and 'MAC Address'. The table lists 14 entries, with the first entry highlighted in blue. The status bar at the bottom shows 'Ready'.

| 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

| | |
|--------------------|--|
| EX71802-0YB | 8-port 10/100BASE-TX + 2-port Gigabit |
| EX71620-X0B | 6-port 10/100BASE-TX + 2-port 100BASE-FX |
| EX71622-XYB | 6-port 10/100BASE-TX + 2-port 100BASE-FX +2-port Gigabit |
| EX71440-X0B | 4-port 10/100BASE-TX + 4-port 100BASE-FX |

* DIN-Rail mounting kit included.

+ 100FX Fiber Options (X)

| | |
|----------|-------------------------|
| 1 | Multi Mode (SC) - 2Km |
| 2 | Multi Mode (ST) - 2Km |
| A | Single Mode (SC) - 20Km |
| B | Single Mode (SC) - 40Km |
| V | 100BASE SFP (DDM) |

* More 100FX Fiber options also available upon request.

+ Gigabit Port Options (Y)

| | |
|----------|---|
| 1 | 10/100/1000BASE-TX |
| 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 |
| V | 100/1000BASE SFP (DDM) |

* More Gigabit options also available upon request.

+ Accessories

| | |
|----------------------------------|--|
| Hardened 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 |
| EB-232 | Configuration Backup and Restoration Tool |

