EX77964

Lite L3 Hardened Managed 24-port Gigabit and 4-port 1G/10G SFP+ Ethernet Switch

Overview

EtherWAN's EX77964 is a 28-Port gigabit hardened rack mounted managed Ethernet switch platform. Equipped with 16 gigabit copper, 8 gigabit copper/SFP combo and 4 10-gigabit SFP+ ports, the EX77964 provides flexibility, speed, and reliability to support networks for urban infrastructure, transportation, security, power substations, and other areas where connectivity is crucial.

EtherWAN — "When Connectivity is Crucial."

Highlights

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

High Bandwidth and Versatility

- Up to 24 10/100/1000BASE-T(X) ports
- Up to 8 dual-rate 100/1000BASE SFP ports
- 4 1G/10G SFP+ uplink ports

L2/L3 Functionality

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

Support

- Complimentary Technical Support
- Free Firmware Upgrades
- Limited Lifetime Warranty

Features

Interface

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

Management

- Firmware upgrade
- Configuration backup via TFTP
- DHCP Server/Client
- RMON (Remote Monitoring)
- 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
- ACL (Access Control List)

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) and Alpha-Chain

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

Specifications

Interface

Ethernet

- 16 or 24 x 10/100/1000BASE-T(X)
- 8 x 100/1000BASE SFP
- 4 x 10G SFP+

Console

- 1 x RJ45 RS-232

Config Backup

- 1 x USB (Type A Connector)

Alarm Contact

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

LED Indicators

- Per Unit: Power
- 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
- 14,881,000pps for 10Gbps

Processing Type

- Store-and-Forward
- Auto-negotiation
- Half-duplex back-pressure and IEEE 802.3x Full-

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 62368

Vibration

- IEC 60068-2-6 Fc

Shock

- IEC 60068-2-27 Ea

Free Fall

- FED STD 101C Method 5007.1

Industrial Compliance

Power

Input

- 12-24VDC Redundant (Terminal block)

Power Consumption

- 31.08W

Physical

Casing Material

- Metal

IP Rating

- IP30

Dimensions

- 430 x 254 x 44.2mm (W x D x H)
  16.9" x 10" x 1.74"

Weight

- 3.29Kg (7.25lbs)

Installation Type

- Rack mounting

Warranty

Length

- Limited Lifetime

Details

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

What's Included

Device

- Ethernet Switch

Cables

- 1 Console Cable

Installation

- Mounting brackets

Documentation

- Quick Install Guide

Dimensions

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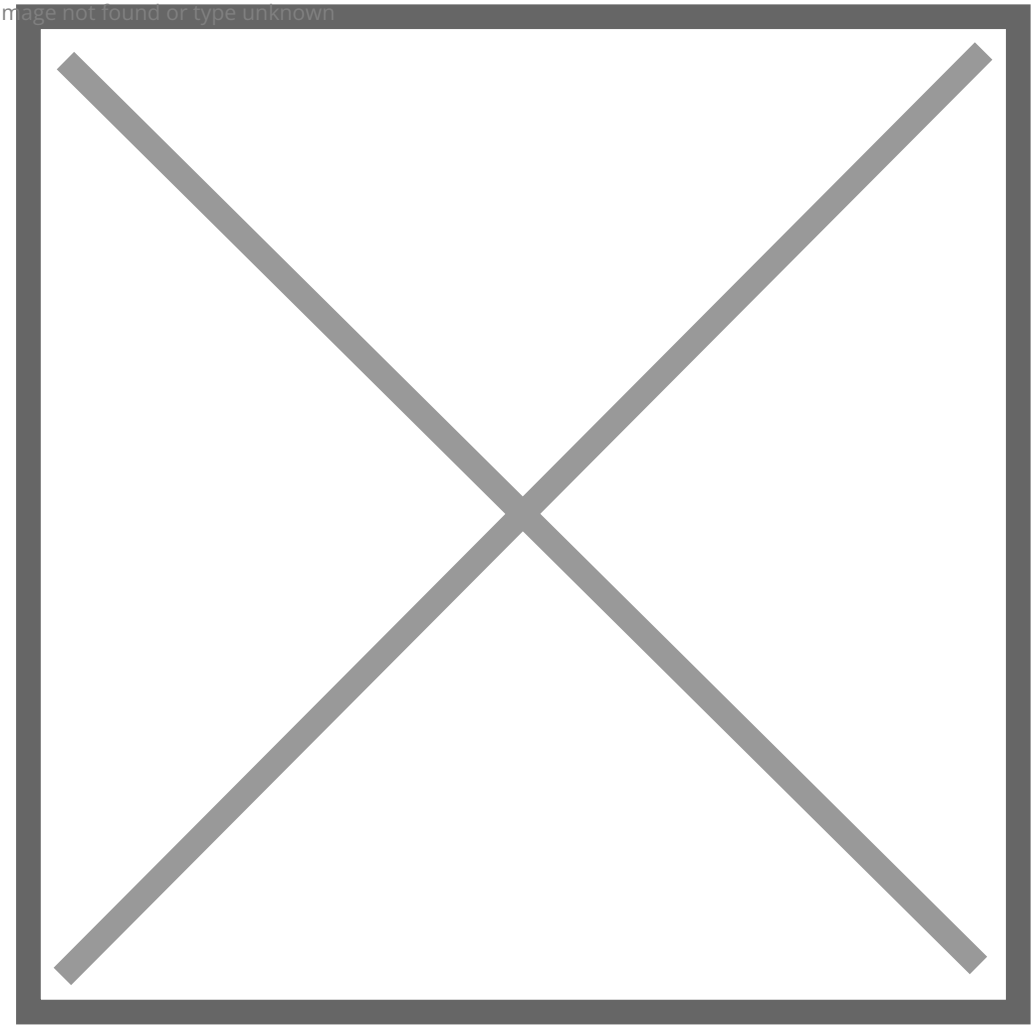

Application

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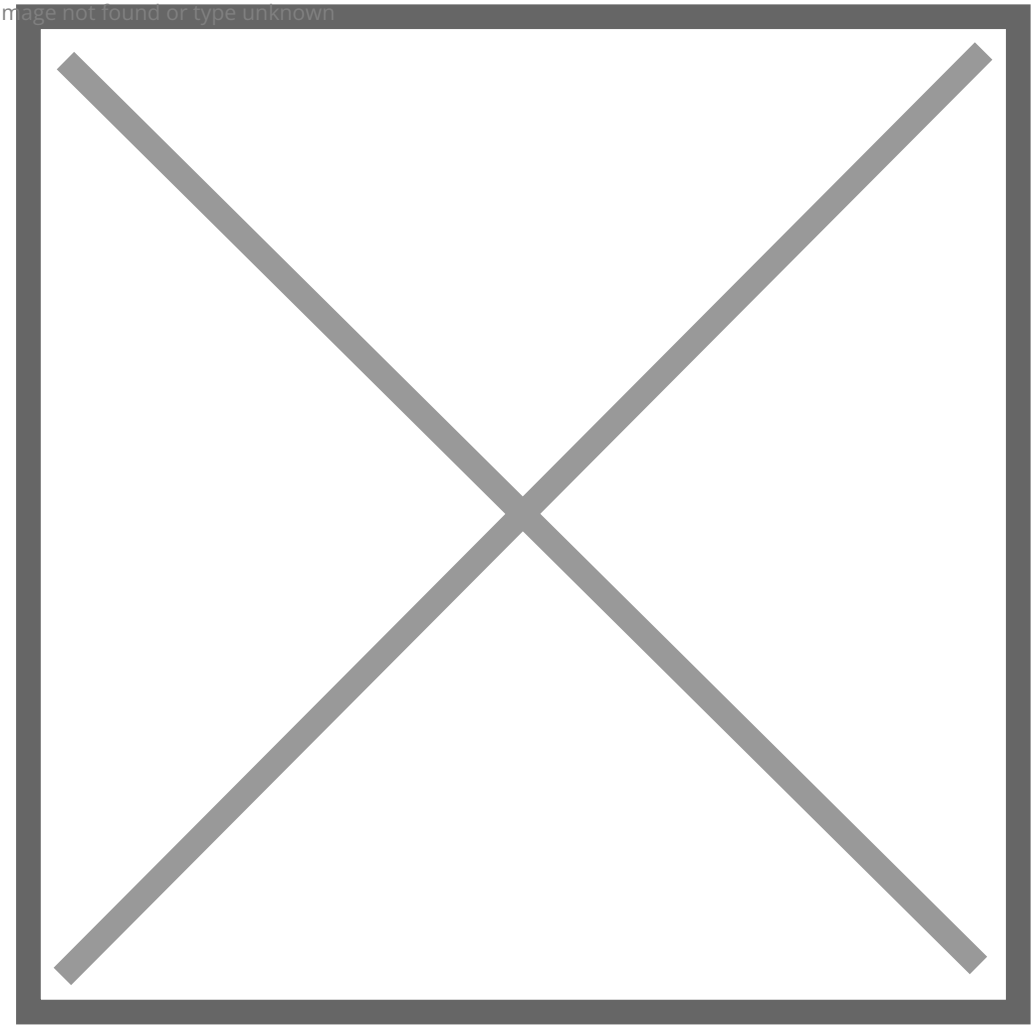
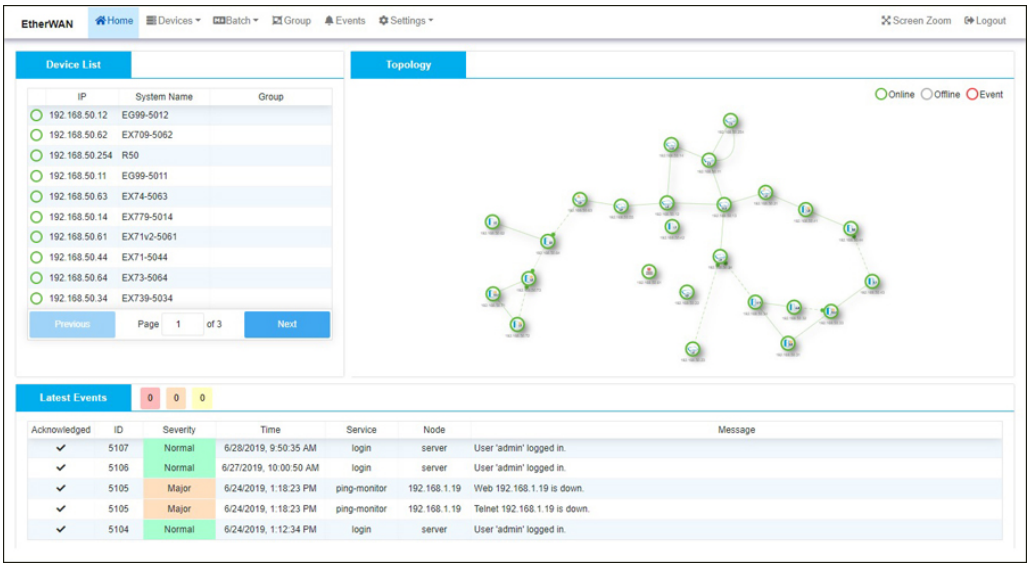
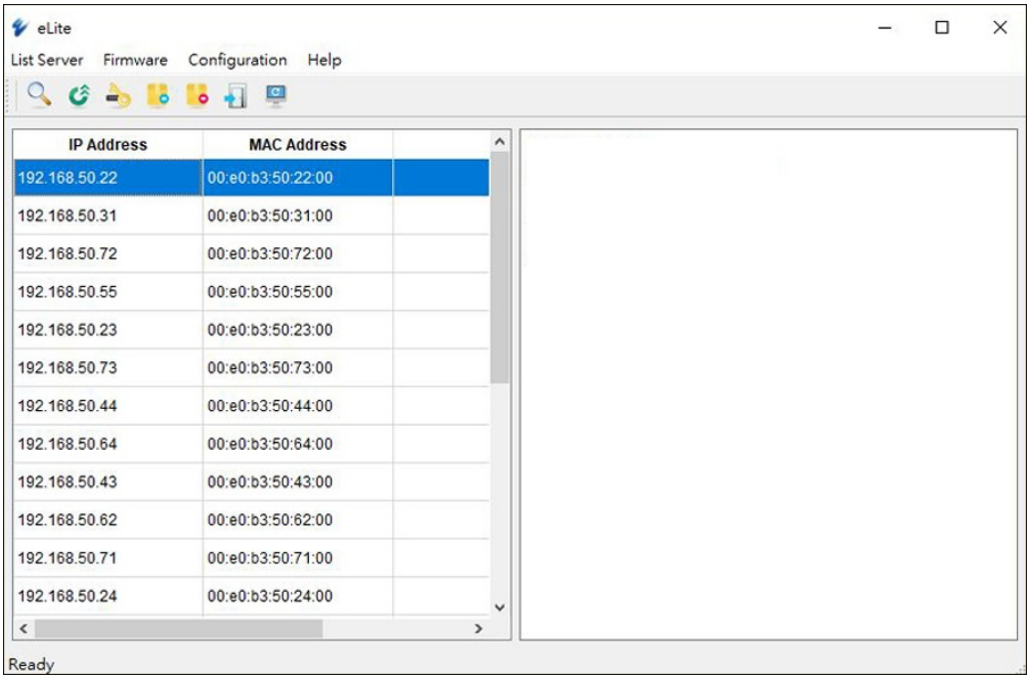


Software

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





Ordering Info

Model

EX77964-8VB	16-port 10/100/1000BASE-TX + 8-port 100/1000BASE SFP Combo + 4-port 1G/10G SFP+ (12-24VDC)

Accessories

Hardened 100BASE SFP Modules	www.etherwan.com/products/sfp-fiber-transceiver
Hardened Gigabit and 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**	HDR-60-24 60W 24VDC DIN-Rail Power Supply
EB-232	Configuration Backup and Restoration Tool

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