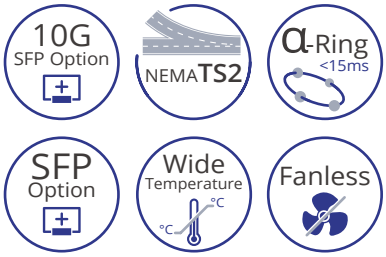
EX77964

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



Product 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

Lite Layer 3 Functionality

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

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

Support

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

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.

Ordering Information

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

Software 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

Hardware 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 14,880,952pps for 10Gbps
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	12-24VDC 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

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	NEMA TS2

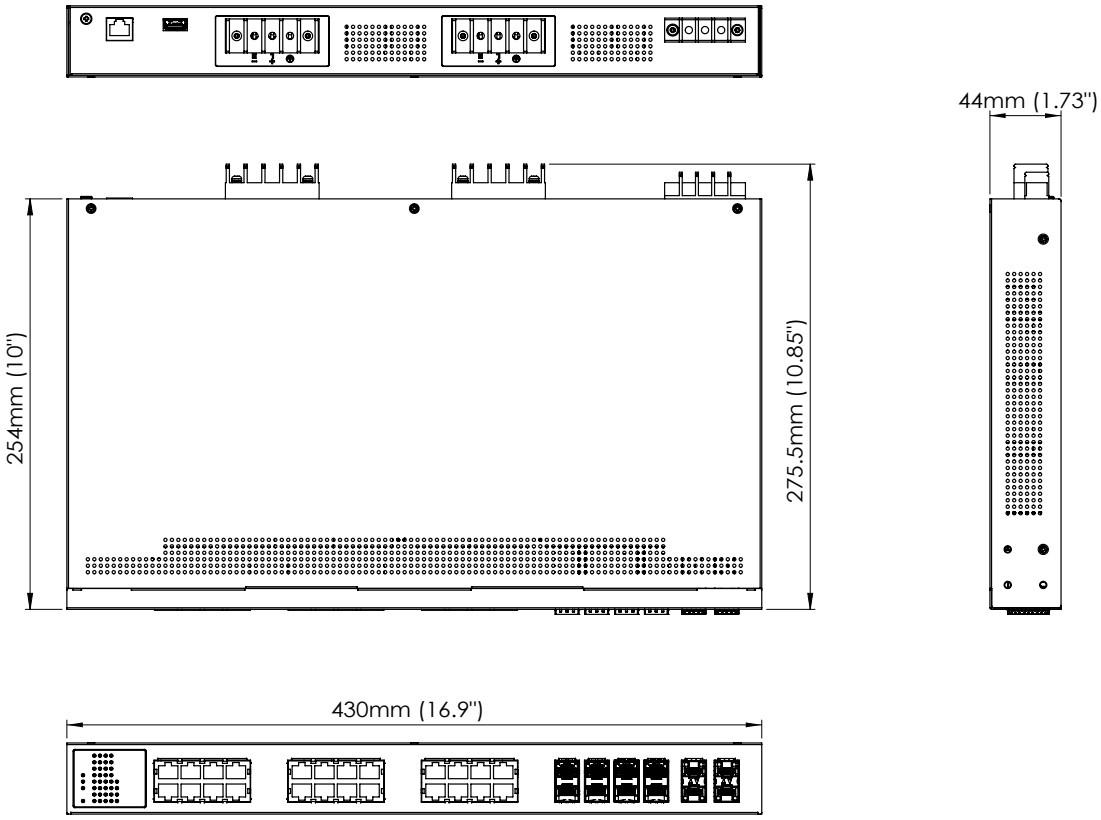
Warranty

Length	Limited Lifetime
Details	www.etherwan.com/support/warranty-policy

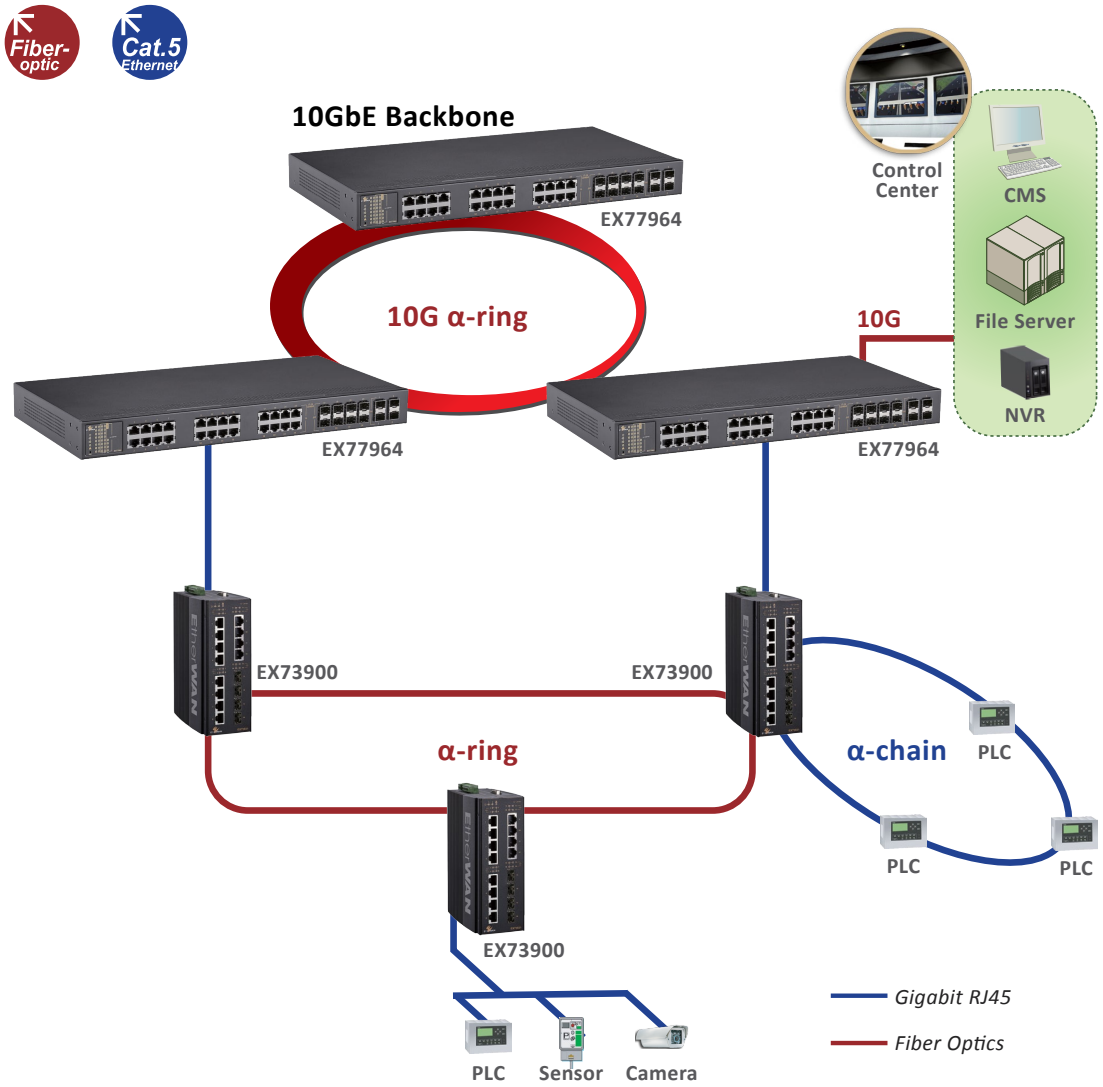
What’s Included

Device	Ethernet Switch
Cables	1 Console Cable
Installation	Mounting brackets
Documentation	Quick Install Guide

Dimensions

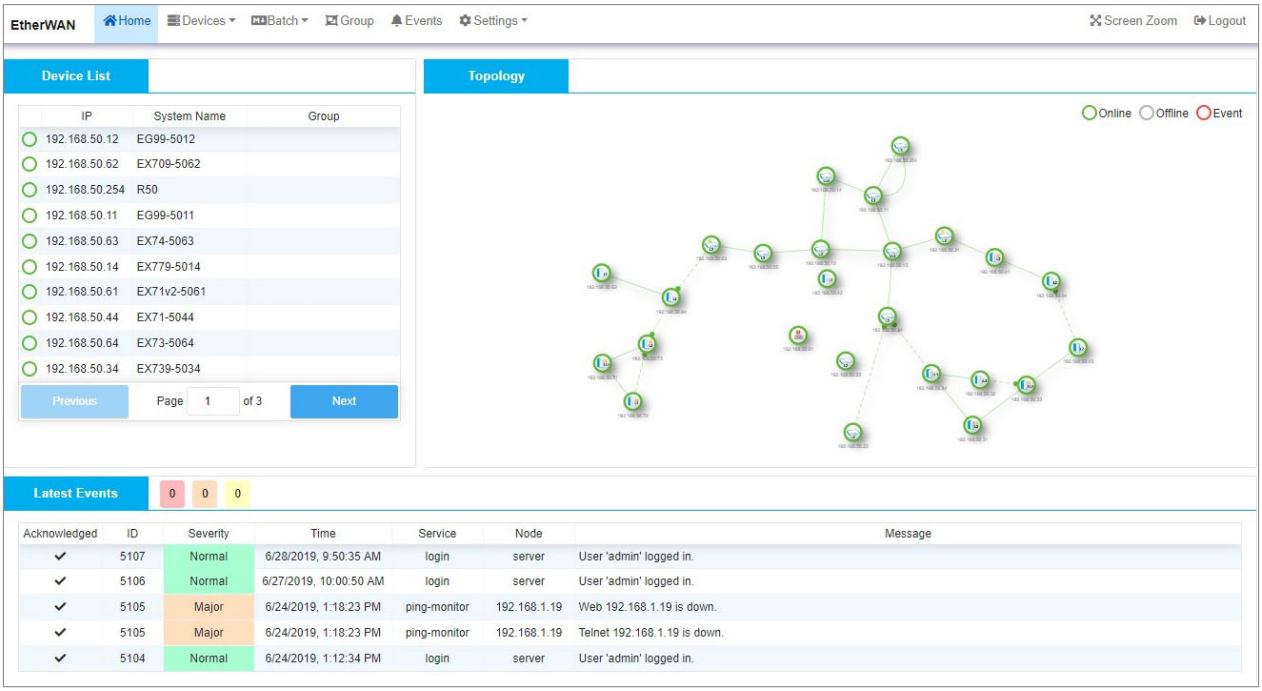


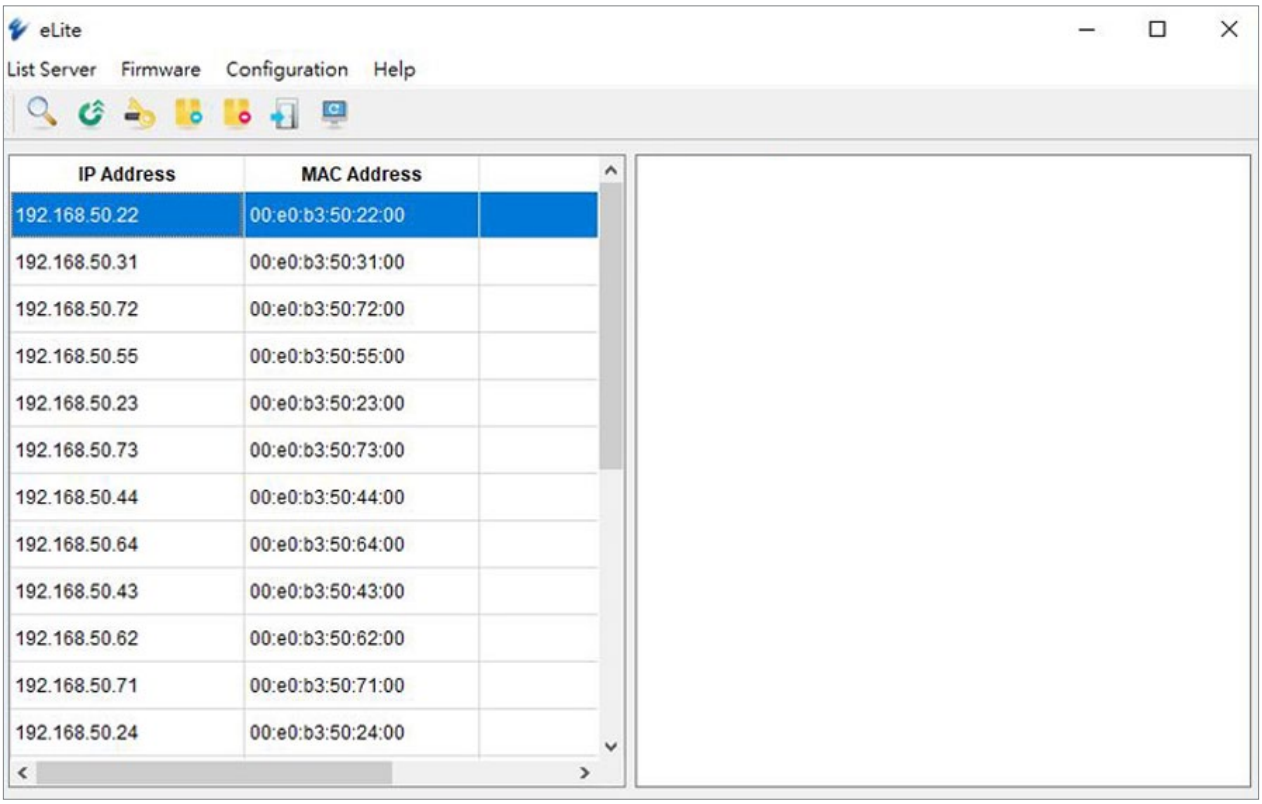
Application



Software

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





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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