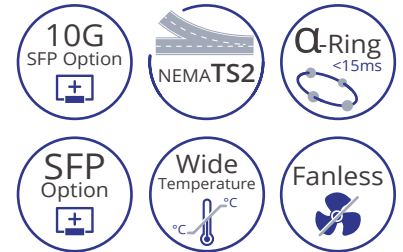


EX77964

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

➤ 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

➤ Lite Layer 3 Functionality

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

➤ 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)
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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	

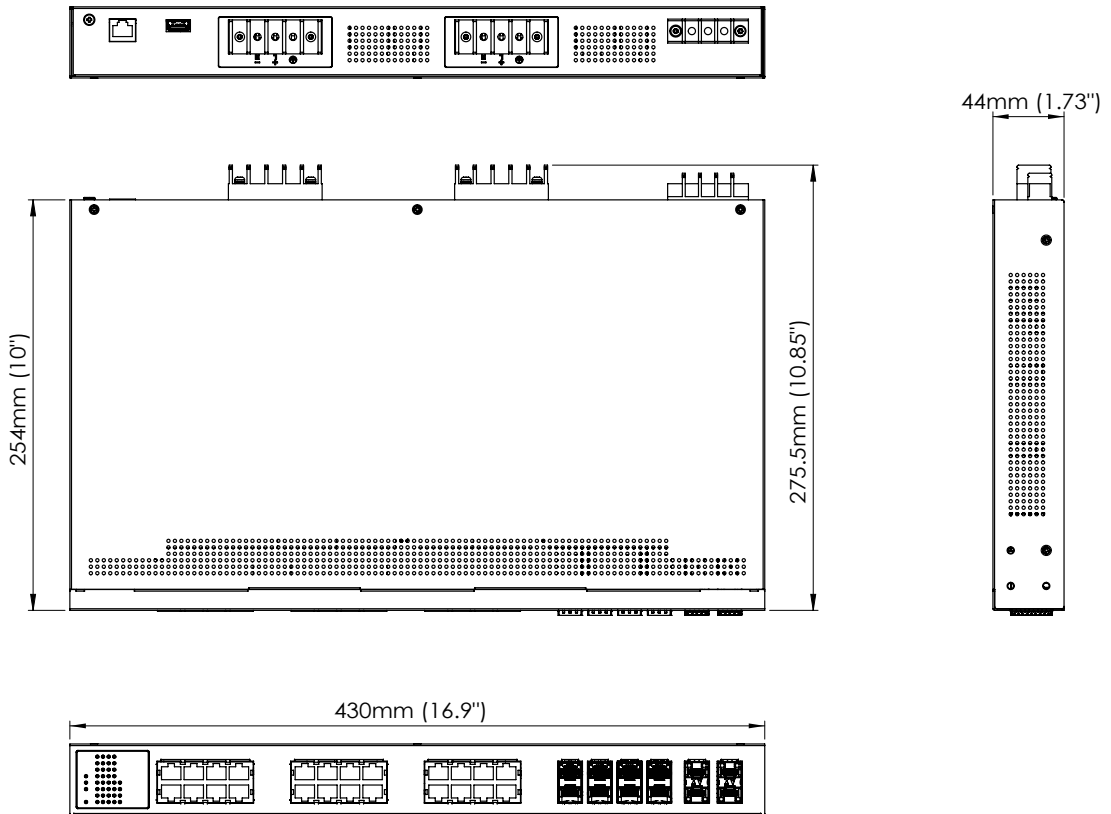
Layer 3 Features	+
IP Packet Routing	Maximum number of routes in hardware: 64 entries Static Routing RIP v1/v2 OSPF v2
Routing Redundancy	VRRP

Hardware Specifications

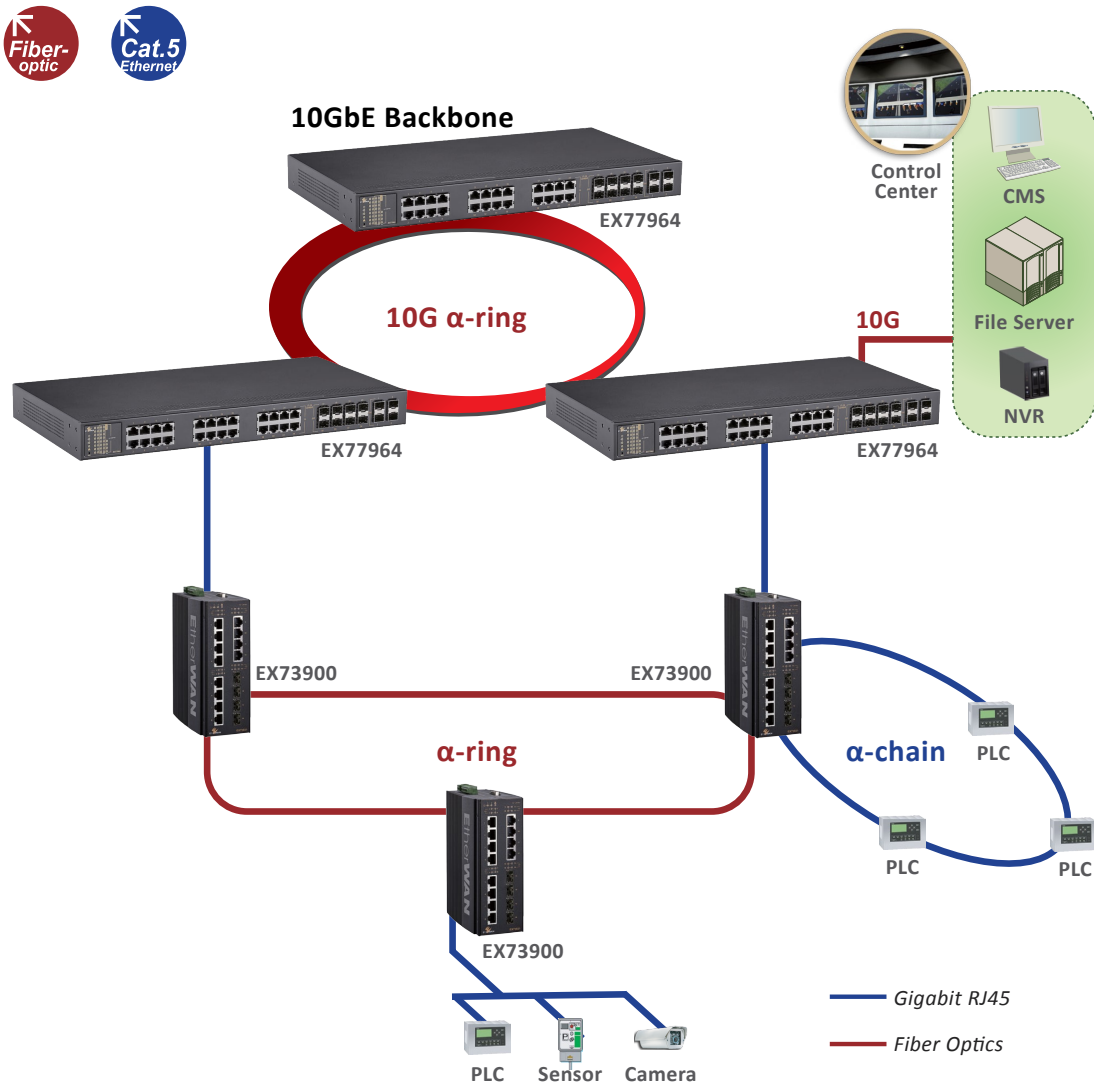
Interface		+
Ethernet	16 or 24 x 10/100/1000BASE-T(X) 8 x 100/1000BASE SFP 4 x 10G SFP+	
Console	1 x RJ45 RS-232	
Config Backup	1 x USB (Type A Connector)	
Alarm Contact	1 x Relay output, current capacity 0.6A/30VDC	
LED Indicators	Per Unit: Power Per Port: Link/Activity (Green)	
Technology		+
Standards	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

EtherWAN Home Devices Batch Group Events Settings Screen Zoom Logout

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	

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Topology

Latest Events 0 0 0

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.

eLite List Server Firmware Configuration Help

Search, Refresh, Add, Edit, Delete, Print, Help icons

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

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	