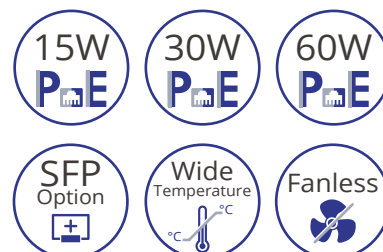


EX78900R Series

Hardened Managed 16-Port Gigabit PoE Ethernet Switch



Product Highlights

High Bandwidth and Versatility

- 12 10/100/1000BASE-T(X) ports for High bandwidth connections
- 4 Dual-rate 100/1000BASE SFP uplink ports for fiber connections
- Full capacity switching running at full duplex

Hardened-Grade for Non-Ventilated & Harsh Environments

- Wide operating temperature range -40 to 70°C (-40 to 158°F)
- Fanless operation
- High impact, thermal shock, and electrical noise resistance

Lite Layer 3 Functionality

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

PoE Features

- IEEE 802.3bt with 60W; 240W Power budget
- Long distance PoE up to 250m (820ft)
- PoE watchdog monitors status of connected PoE devices

Management/Security Features

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

Support

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

Overview

EtherWAN's EX78900R series is a hardened managed PoE Ethernet switch platform. Equipped with 12 gigabit PoE ports along with 60W power and IEEE 802.3bt protocol support and 4 dual-rate gigabit SFP ports, the EX78900R series provides flexibility, speed, and reliability for networks in urban infrastructure, transportation, security, and other areas where connectivity is crucial.

Ordering Information

Model

EX78934R-0VB	12-port 10/100/1000BASE-T(X) PoE + 4-port 100/1000BASE SFP
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Software Features

Interface	+
CLI, Telnet, Web GUI	
Management	+
Firmware upgrade	
Configuration backup	
DHCP Server/Client	
RMON (Remote Monitoring)	
Port Mirroring	
NTP (Network Time Protocol) synchronization	
LLDP (Link Layer Discovery Protocol)	
IPv4/IPv6	
SNMP v1/v2c/v3	
Security	+
MAC Address filtering	
Enable/Disable port	
Storm control	
System logging	
IEEE 802.1x LAN Access control	
Remote authentication through RADIUS and TACACS+	
Complex password support	
Multi-user login and privileged access management	
SSH for CLI and Telnet security	
SSL and HTTPS for web security	
ACL (Access Control List, up to 4096 entries)	
Quality of Service (QoS)	+
Priority Queues: 8 queues per port	
Traffic classification based on IEEE 802.1p CoS (Class of Service), DSCP (Differentiated Services Code Point), WRR (Weighted Round Robin), and strict mode	
Rate Limiting (Ingress/Egress)	

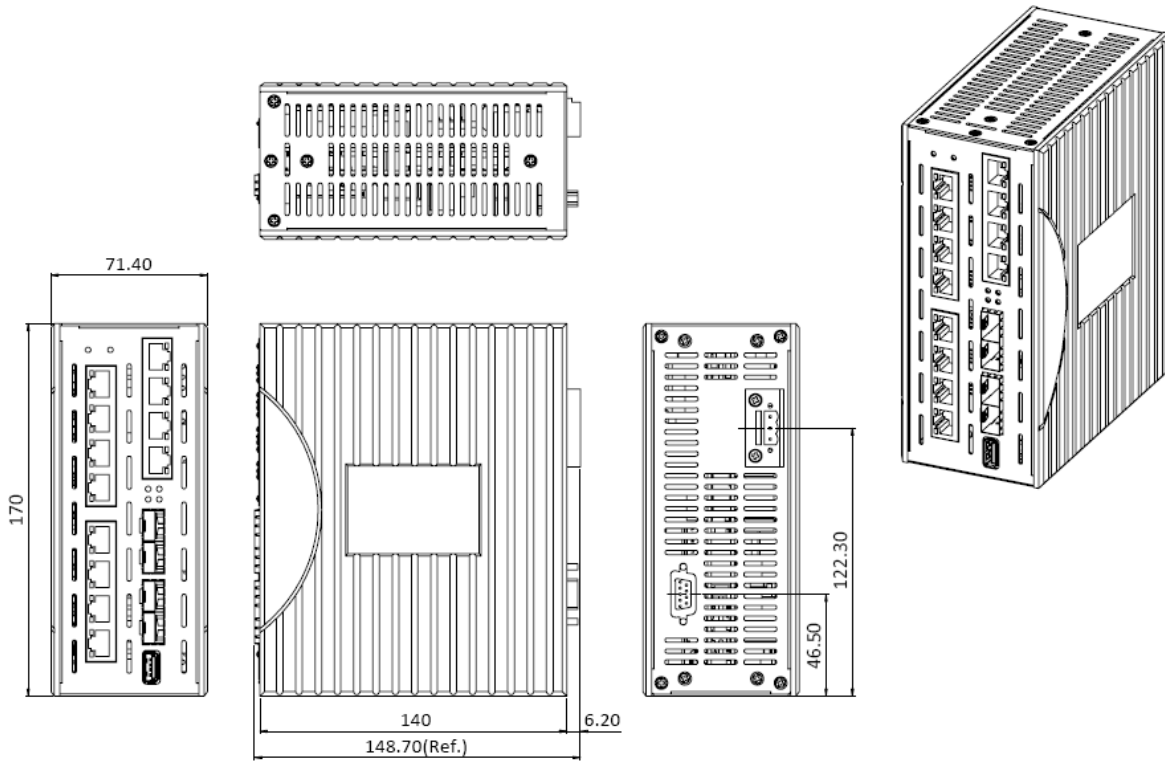
Layer 2 Features	+
Auto-negotiation for port speed and duplex	Flow Control IEEE 802.3x full duplex mode Back-pressure half duplex mode
Redundant Protocols	IEEE 802.1D STP IEEE 802.1w RSTP IEEE 802.1s MSTP EtherWAN's Alpha-Ring network fault recovery
VLANs	IEEE 802.1Q Tag VLANs GVRP GMRP
Link Aggregation	Static Trunk (4 groups) 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
Software Properties and Performance	+
Switching Fabric	32Gbps
Forwarding Rate	23.5Mpps
Max VLANs	256 (4096 VID)
Jumbo Frame Size	9KB
MAC Table Size	16K
Packet Buffer Memory	12M bits

Hardware Specifications

Interface		+
Ethernet	12 x 10/100/1000BASE-T(X) 4 x 100/1000BASE SFP	
Console	1 x RS232	
Config Backup	1 x USB (Type A Connector)	
LED Indicators	Per Unit: Power Per Port: Link/Activity (Green) Per PoE Port: PoE Status (Orange)	
Technology		+
Standards	IEEE 802.3 10BASE-T IEEE 802.3u 100BASE-TX/100BASE-FX IEEE 802.3ab 1000BASE-T IEEE 802.3ad link aggregation control IEEE 802.3z 1000BASE-SX/1000BASE-LX IEEE 802.3x full duplex and flow control IEEE 802.1D STP IEEE 802.1p QoS IEEE 802.1Q Tag VLANs IEEE 802.1s MSTP IEEE 802.1w RSTP IEEE 802.1x PNAC IEEE 802.1ab LLDP IEEE 802.3af/at/bt Power over Ethernet	
Forward/Filtering Rate	14,800pps for 10Mbps 148,810pps for 100Mbps 1,488,100pps for 1000Mbps	
Processing Type	Store-and-forward Auto-negotiation Half-duplex back-pressure and full-duplex flow control Auto MDI/MDIX	
System Memory	2Gb DDR3 SDRAM	
Flash Storage	1Gb	
Power		+
Input	52-57VDC Redundant (Terminal block)	
Power Consumption	20W Max (without PoE)	
PoE Modes	802.3af/at Mode A: Pins 1/2(+), 3/6(-) 802.3af/at Mode B: Pins 4/5(+), 7/8(-) 802.3bt (60W): Mode A & B, Pins 1/2(+), 3/6(-), 4/5(+), 7/8(-)	
PoE Power Output	Ports 1-4, 9-12: Up to 30W/port Ports 5-8: Up to 60W/port Power Budget: 240W	
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	1.5kg (3.3lbs)	
Environmental		+
Operating Temp.	-40 to 70°C (-40 to 158°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 61000-4-2 (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)	
Vibration	IEC 60068-2-6	
Shock	IEC 60068-2-27	
Free Fall	FED STD 101C Method 5007.1	
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	

Dimensions



Accessories

Hardened 100BASE SFP Modules +

www.etherwan.com/products/sfp-fiber-transceiver

Hardened Gigabit SFP Modules +

www.etherwan.com/products/sfp-fiber-transceiver

DIN-Rail Power Supplies +

www.etherwan.com/products/din-rail-power-supply