EX78900G Series

Hardened Managed 8-Port Gigabit PoE++ and 4-Port 100/1G/2.5G SFP Ethernet Switch

Overview

The EX78900G series represents EtherWAN's latest advancement in 2.5G Ethernet switch technology, featuring comprehensive Layer 2 and Layer 3 management functionalities. This 2.5G managed PoE switch, compactly DIN-rail mounted, supports up to 8 gigabit PoE ports, providing a maximum of 90W PoE power. It adheres to the IEEE 802.3.bt protocol while maintaining compatibility with IEEE 802.3af and IEEE 802.3at standards, allowing for versatile PoE power delivery ranging from 15W, 30W, 60W to 90W per Ethernet port.

Additionally, the switch integrates up to 4 tri-rate 2.5G SFP uplink ports, providing adaptability with triple-speed options of 100Mbps, 1000Mbps, and 2500Mbps for flexible connectivity expansion. The EX78900G series is designed to offer networks in urban infrastructure, transportation, security, and other critical sectors the trifecta of flexibility, speed, and reliability.

EtherWAN — "**When Connectivity is Crucial.**"

Highlights

2.5GbE High Bandwidth and Scalability

8 x 10/100/1000BASE-T(X) ports for high bandwidth connections

Up to 4 tri-speed 100/1000/2500BASE 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 75°C (-40 to 167°F)

Fanless operation

High impact, thermal shock, and electrical noise resistance

PoE Features

Backward compatible with IEEE 802.3af & IEEE 802.3at

IEEE 802.3bt PoE with up to 90W per port; Max. 480W total power budget

PoE watchdog monitors status of connected PoE devices

Support RESTful API

Easy to acquire data or remote configure settings

Support

Complimentary technical support

Free firmware upgrades and notifications

Limited lifetime warranty

Features

Interface

CLI, Telnet, Web GUI

Management

Firmware Upgrade
Configuration Backup
DHCP Server/Client/Snooping/Relay
RMON (Remote Monitoring)
Port Mirroring
NTP (Network Time Protocol) Synchronization
LLDP (Link Layer Discovery Protocol)
IPv4/IPv6
SNMP v1/v2c/v3
RESTful API

Security

MAC Address Filtering
Enable/Disable Port
Storm Control
System logging
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)

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
ITU-T G.8032 Ethernet Ring Protection Switch (ERPS)

VLANs

IEEE 802.1Q Tag VLANs
GVRP
GMRP

Link Aggregation

Static Trunk (8 groups)
IEEE 802.3ad LACP

IGMP Snooping v1/v2/v3

Layer 3 Features

IP Packet Routing

Maximum 512 hosts
Maximum 64 routes
Static routing
RIP v1/v2
OSPF v2

Routing Redundancy

VRRP v2

Quality of Service (QoS)

Priority Queues: 8 Queues per Port

Traffic Classification Based on IEEE 802.1p CoS (Cost of Service), DSCP (Differentiated Services Code Point), WRR (Weighted Round Robin), and Strict Mode

Rate Limiting (Ingress/Egress)

Software Properties and Performance

Switching Fabric

36Gbps

Forwarding Rate

26.78Mpps

Max VLANs

256 (4096 VID)

Jumbo Frame Size

9KB

MAC Table Size

16K

Packet Buffer Memory

512KB

Specifications

Interface

Ethernet

8 x 10/100/1000BASE-T(X)

2 or 4 x 100/1000/2500BASE SFP

Console

1 x RJ45

Config Backup

1 x USB (Type A Connector)

Alarm Contact

Relay output, current capacity 0.5A/48VDC

LED Indicators

Per Unit: Power 1, Power 2

Per Port: Link/Activity (Green)

Per PoE Port: PoE Status (Amber)

Physical

Casing Material

Metal

IP Rating

IP30

Dimensions

62 x 125 x 145mm (W x D x H)

Weight

0.75 kg (1.65 lbs)

Installation Type

DIN-rail mounting

Wall mounting (Optional)

Rack mounting (Optional)

Panel mounting (Optional)

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 Radius

IEEE 802.1ab LLDP

IEEE 802.3az Energy-Efficient Ethernet (EEE)

IEEE 802.3af/at/bt Power over Ethernet

Forward/Filtering Rate

14,880pps for 10Mbps

148,809pps for 100Mbps

1,488,095pps for 1000Mbps

3,720,238pps for 2500Mbps

Processing Type

Store-and-forward

Auto-negotiation

Half-duplex back-pressure and full-duplex flow control

Auto MDI/MDIX

System Memory

1GB DDR3 SDRAM

Flash Storage

128MB

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

EN 55032

BSMI

EMS

EN 61000-6-2

- IEC 61000-4-2 (ESD)
- IEC 61000-4-3 (Radiated RFI)
- IEC 61000-4-4 (Burst)
- IEC 61000-4-5 (Surge)
- PoE Ports: line to earth 6kV Surge
- IEC 61000-4-6 (Induced RFI)
- IEC 61000-4-8 (Magnetic field)

Safety

UL 62368

Traffic

NEMA TS2

Railway

EN 50121-4

Vibration

IEC 60068-2-6

Shock

IEC 60068-2-27

Free Fall

IEC 60068-2-31

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)

MTBF

2,696,769 hours

Power

Input

46-57VDC Redundant (Terminal block)**
** Connected powered devices (PDs) power input requirements:
IEEE 802.3 af (15W): 46 – 57 VDC
IEEE 802.3 at (30W): 52 – 57 VDC
IEEE 802.3 bt (Type 3: 60 Watts): 52 – 57 VDC
IEEE 802.3 bt (Type 4: 90 Watts): 54 – 57 VDC

Power Consumption

Max. 14W (without PoE)

Power Budget (Max.)

For EX78912G-0BT:
• 240 Watts
For EX78924G-0BT & EX78922G-0BT:
• 480 Watts up to operating temp. 70°C
• 400 Watts up to operating temp. 75°C

Protection

Reverse Polarity Protection

Warranty

Length

Limited Lifetime

Details

www.etherwan.com/support/warranty-policy

What's Included

Device

Ethernet switch

Cables

1 Console cable

Installation

DIN-Rail mounting kit

MPN

EX78912G-0BT

1733667

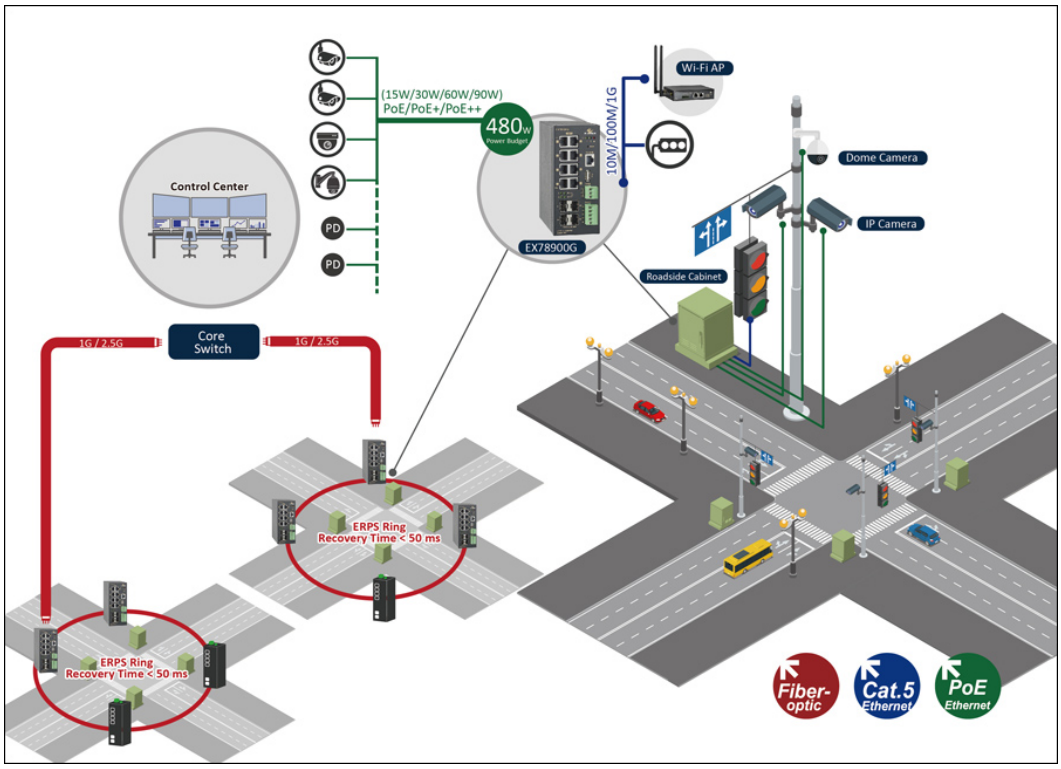
EX78922G-0BT

1733666

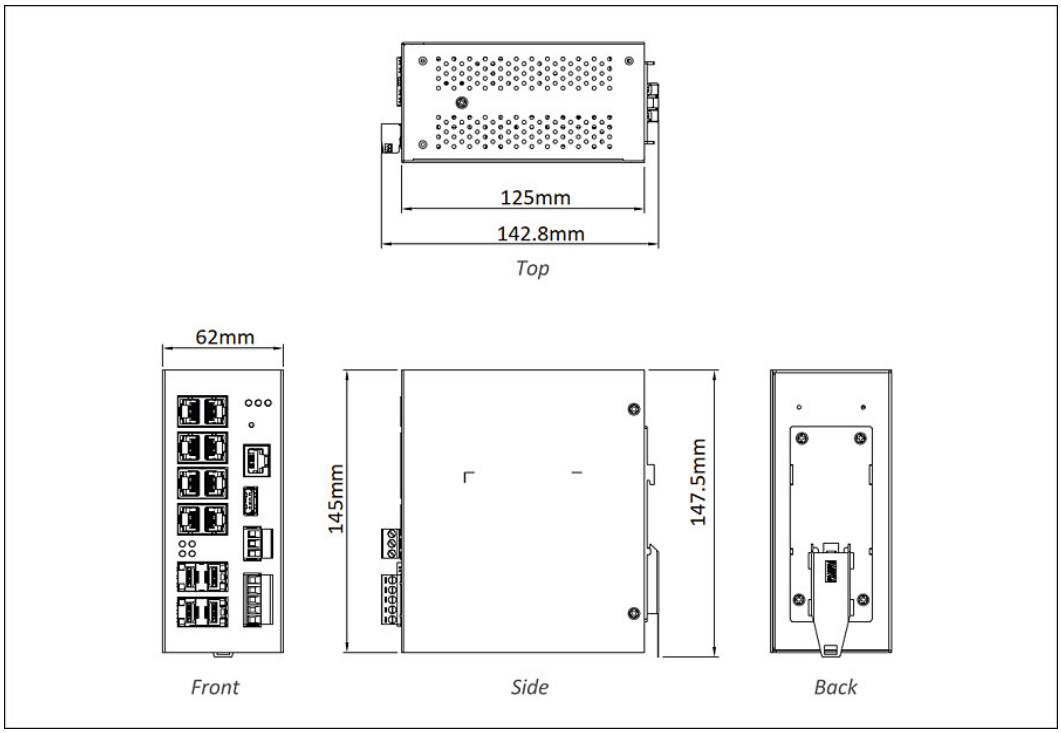
EX78924G-0BT

1733573

Application



Dimensions



Ordering Info

Model

EX78924G-XYZ	8-port 10/100/1000BASE-T(X) PoE++ 90W + 4-port 100/1000/2500BASE SFP
EX78922G-XYZ	8-port 10/100/1000BASE-T(X) PoE++ 90W + 2-port 100/1000/2500BASE SFP
EX78912G-XYZ	4-port 10/100/1000BASE-T(X) PoE++ 90W + 4-port 10/100/1000BASE-T(X) + 2-port 100/1000/2500BASE SFP

Power Input Range (X)

0	46 to 57VDC

PoE PSE Standard Support (Y)

B	IEEE 802.3bt / IEEE 802.3at / IEEE 802.3af

Power Input Interface (Z)

T	Terminal Block

Accessories

SFP Modules

Model Number	Transmission Speed	Mode	Distance	Operating Temperature	Wavelength	Connector Type	DDM
SFP2IS20M	2500Mbps	Single-mode	20km	-40 to 85°C	1310nm	Duplex LC	✔
SFP2IM2AM	2500Mbps	Multi-mode	160m	-40 to 85°C	850nm	Duplex LC	✔
SFP2XT1AM	2500Mbps	-	100m	-40 to 85°C	-	RJ-45	-
SFPGIM5AM	1000Mbps	Multi-mode	275/550m	-40 to 85°C	850nm	Duplex LC	✔
SFPGIM02M	1000Mbps	Multi-mode	2km	-40 to 85°C	1310nm	Duplex LC	✔
SFPGIS10M	1000Mbps	Single-mode	10km	-40 to 85°C	1310nm	Duplex LC	✔

SFPGIS20M	1000Mbps	Single-mode	20km	-40 to 85°C	1310nm	Duplex LC	✔
SFPGXT1AM	1000Mbps	-	100m	-40 to 85°C	-	RJ-45	-
EX-0155NSP-MB2L-A	100Mbps	Multi-mode	2km	-40 to 85°C	1310nm	Duplex LC	-
SFPMIS20M (DDM)	100Mbps	Single-mode	20km	-40 to 85°C	1310nm	Duplex LC	✔

For more SFP, please visit website: www.etherwan.com/products/sfp-fiber-transceiver

Industrial DIN-Rail Power Supplies

Model Number	Input Voltage	Output Voltage	Description	Operating Temperature
EPOW-54-400	100-277VAC	54VDC	Hardened NEMA TS2 Power Supply 54V 400W - No Deration at High Temps	-40 to 167°F
EPOW-54-600	100-277VAC	54VDC	Hardened NEMA TS2 Power Supply 54V 600W - No Deration at High Temps	-40 to 167°F
EPHX-48-240	100-240VAC	48VDC	240W/5A DIN-Rail 48VDC (42-56VDC Adjustable) Industrial Power Supply - No Deration at High Temps	-4 to +158°F
EPHX-48-480	100-240VAC	48VDC	480W/10A DIN-Rail 48VDC (36-55VDC Adjustable) Industrial Power Supply - No Deration at High Temps	-4 to +158°F

Mounting Brackets

Part Name	Description	Image

KP-AA96-480	Panel Mounting Adapter	
KP-BK78900G	Panel Mounting Bracket	
KR-BK71000	Rack Mounting Bracket	

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