# EX78900G Series

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

## Highlight

### 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

### 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

### 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

### Support

Complimentary technical support
Free firmware upgrades and notifications
Limited lifetime warranty

# 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.**"

# 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

## 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)

## 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)

## 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

## 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)

## Technology

### Standards

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

## + 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

## 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

## 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**

TBD

## Regulatory

**ISO**

Manufactured in ISO-9001 facility

**EMI**

FCC Part 15B Class A

VCCI Class A

EN 61000-6-4

**EMS**

EN 61000-6-2

**Safety**
UL 62368

**Traffic**
NEMA TS2

**Rail**
EN 50121-4

**Vibration**
IEC 60068-2-6

**Shock**
IEC 60068-2-27

**Free Fall**
IEC 60068-2-31

## Warranty

**Length**
Limited Lifetime

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

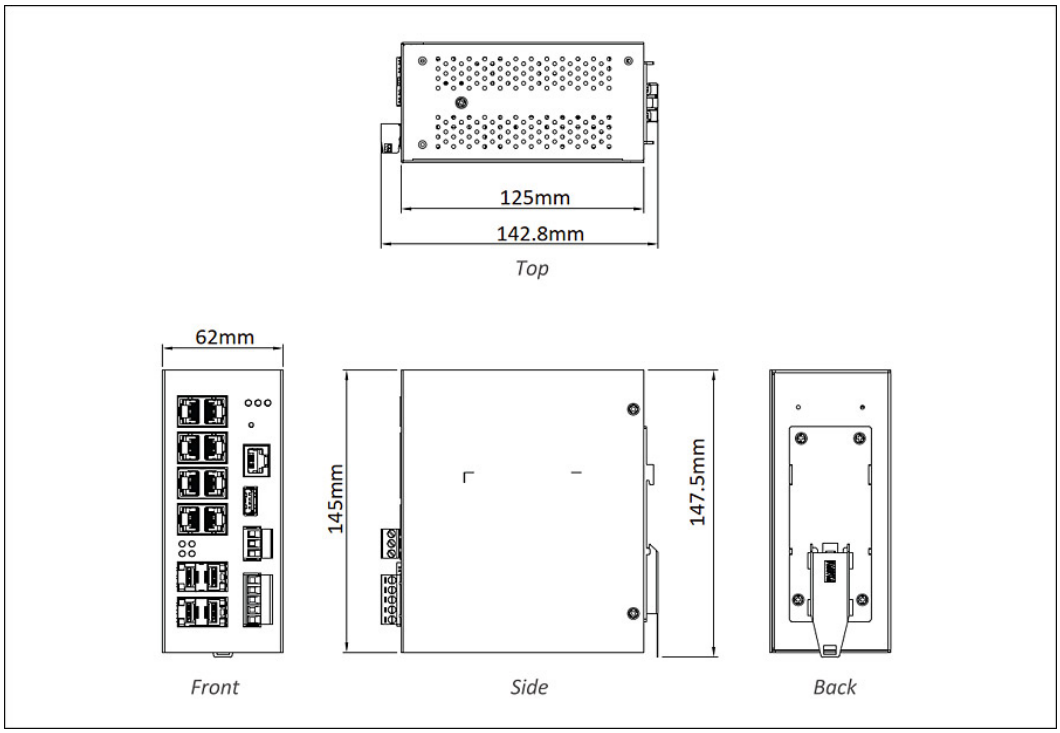
## What's Included

**Device**
Ethernet switch

**Cables**
1 Console cable

**Installation**
Mounting brackets, screws

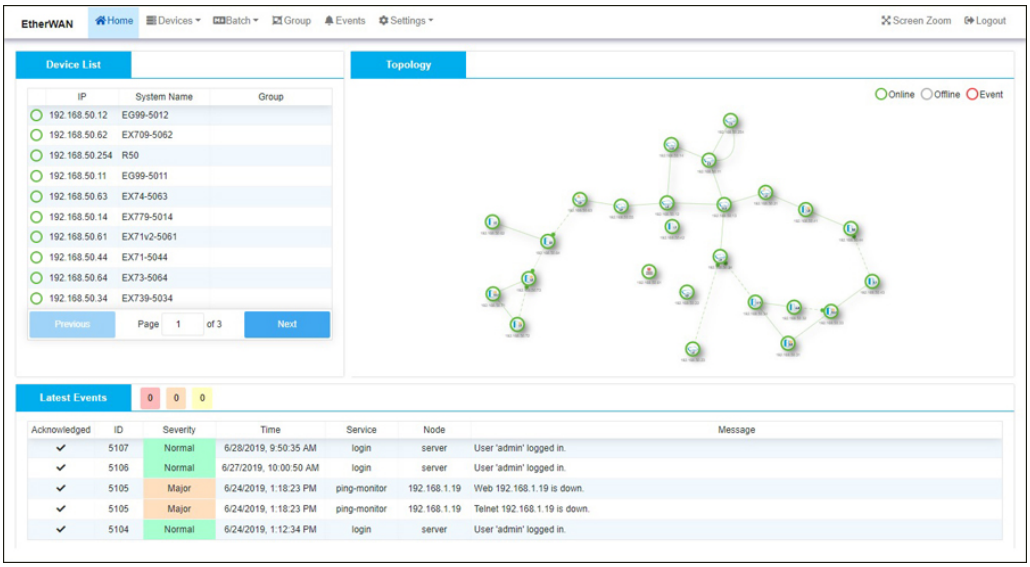
## Dimensions

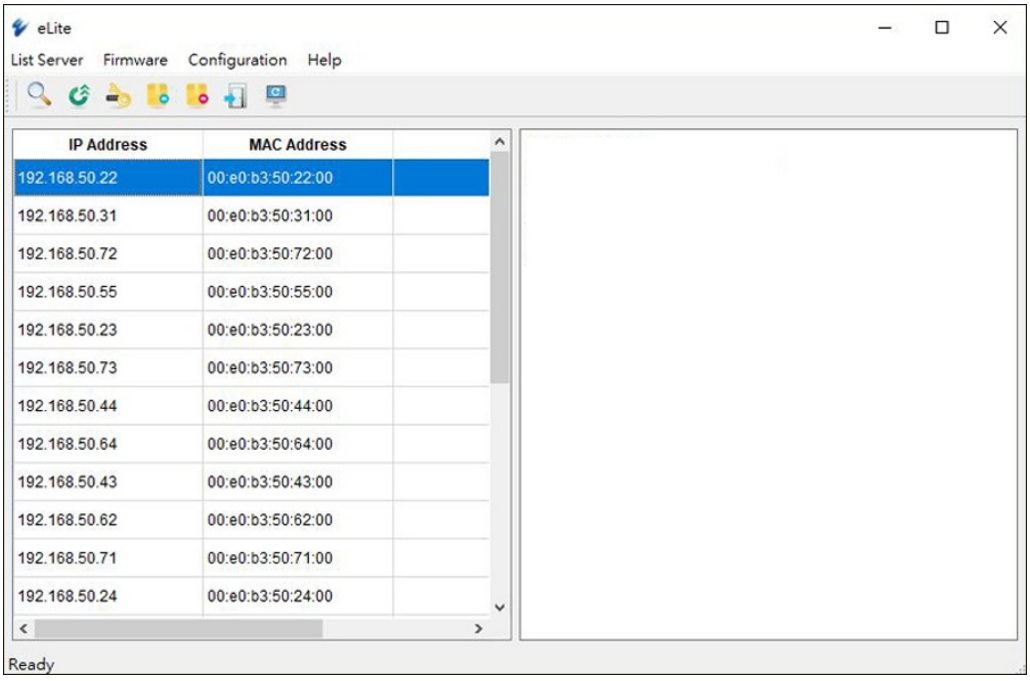



## Application

# Software

| | |
|---|---|
| **Network Management** | eVue™ Network Configuration and Monitoring Tool |
| **Network Discovery** | eLite™ Network Discovery and IP Configuration Tool |



# Ordering Info

## Model

| | |
|---|---|
| **EX78924G-0BT** | 8-port 10/100/1000BASE-T(X) PoE++ 90W + 4-port 100/1000/2500BASE SFP |
| **EX78922G-0BT** | 8-port 10/100/1000BASE-T(X) PoE++ 90W + 2-port 100/1000/2500BASE SFP |
| **EX78912G-0BT** | 4-port 10/100/1000BASE-T(X) PoE++ 90W + 4-port 10/100/1000BASE-T(X) + 2-port 100/1000/2500BASE SFP |

## 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

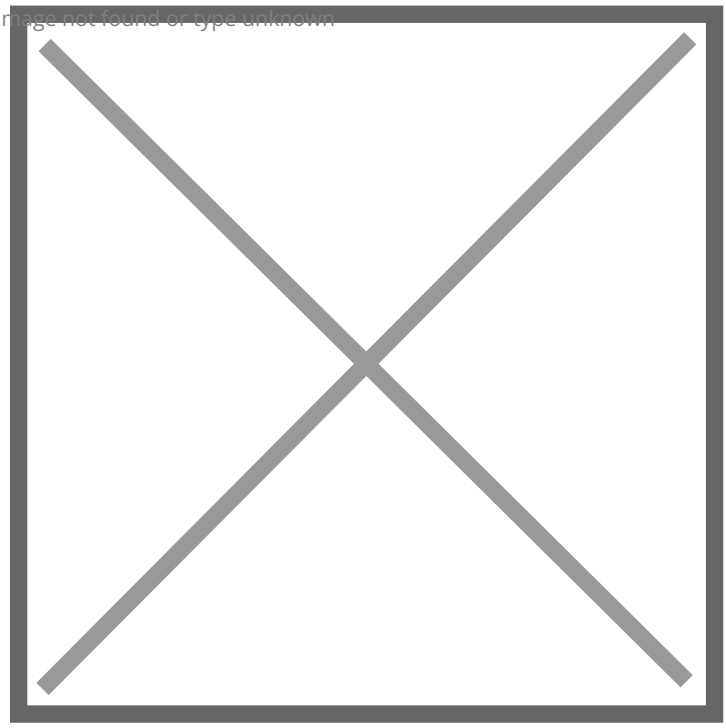
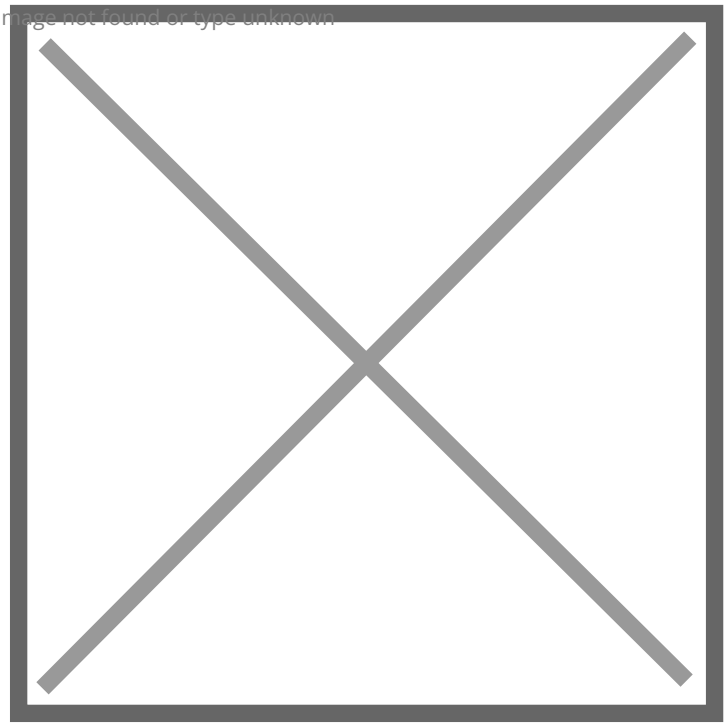
**Industrial DIN-Rail Power Supplies**

| Model Number | Input Voltage | Output Voltage | Description | Operating Temperature |
|---|---|---|---|---|
| **NDR-480-48** | 90 - 264VAC | 48VDC | 480W/10A DIN-Rail 48VDC Industrial Power Supply | -20 to 70°C |
| **NDR-240-48** | 90 - 264VAC | 48VDC | 240W/5A DIN-Rail 48VDC Industrial Power Supply | -20 to 70°C |

| | | | | |
|---|---|---|---|---|
| **NDR-120-48** | 90 - 264VAC | 48VDC | 120W/2.5A DIN-Rail 48VDC Industrial Power Supply | -20 to 70°C |

For more Power Supplies, please visit website: www.etherwan.com/products/din-rail-power-supply.

## DIN-Rail Mounting Kits

| Part Name | Description |
|---|---|
| **KP-AA96-480** | Image not found or type unknown  |
| **KP-G300** | Image not found or type unknown  |

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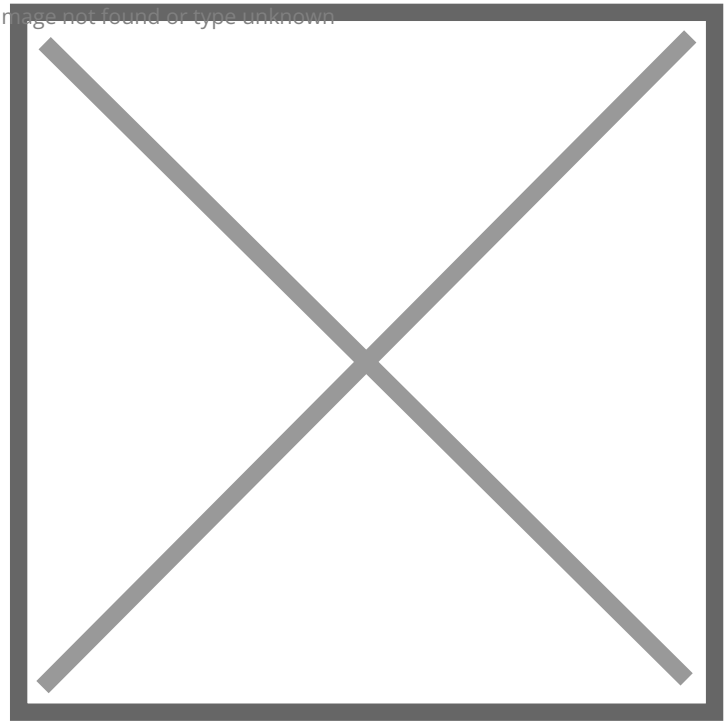

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