EX78900G シリーズ

広範囲動作温度対応産業用/マネジードギガビット PoE++8ポート+4ポート100/1G/2.5G SFPイーサネットスイッチ





概要

EX78900GシリーズはEtherWANの最新の2.5Gイーサネットスイッチ技術を代表する製品で、充実したレイヤー2とレイヤー3のマネジード機能を備えています。この2.5GマネジードPoEスイッチは、コンパクトにDINレールに取り付けられ、最大8ポートのギガビットPoEポートをサポートし、最大90WのPoE電力を提供します。IEEE 802.3btプロトコルに準拠しながら、IEEE 802.3afとIEEE 802.3atの規格との互換性を維持し、ポートごとに15W、30W、60W、90Wという多様なPoE電力供給が可能です。

さらに、スイッチは最大4ポートのトリレート2.5G SFPアップリンクポートを統合し、100Mbps、1000Mbps、2500Mbpsという3つの速度オプションで柔軟な接続拡張ができるようになっています。EX78900Gシリーズは、都市インフラ、交通、セキュリティなどの重要な分野のネットワークに、柔軟性、速度、信頼性を提供するように設計されています。

EtherWAN — "When Connectivity is Crucial."

特長

2.5GbE 高帯域幅と拡張性

高帯域幅接続向けの8ポート10/100/1000BASE-T(X)

ファイバーコネクション用の最大4つの100/1000/2500BASE SFPアップリンクポート

全二重通信で動作するフルキャパシティのスイッチング

通気性のない厳しい環境向けの産業用仕様

広範囲な動作温度範囲 -40°Cから75°C（-40°Fから167°F）

ファンレス

高い耐衝撃性、熱ショック耐性、および電気ノイズ耐性

PoE 機能

IEEE 802.3afおよびIEEE 802.3atとの後方互換性があります

IEEE 802.3bt PoEにより1ポートあたり最大90Wまでの電力供給が可能、合計最大480Wパワーバジェットです

PoEウォッチドッグは接続されたPoEデバイスの状態を監視します

RESTful APIを対応

データ取得プロセスを簡素化、リモートでの展開と管理効率を向上させます

サポート

技術サポート

ファームウェアのアップグレード

永久保証

機能

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 (4M bits)

仕様

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/jp/support/warranty-policy

What's Included

Device

Ethernet switch

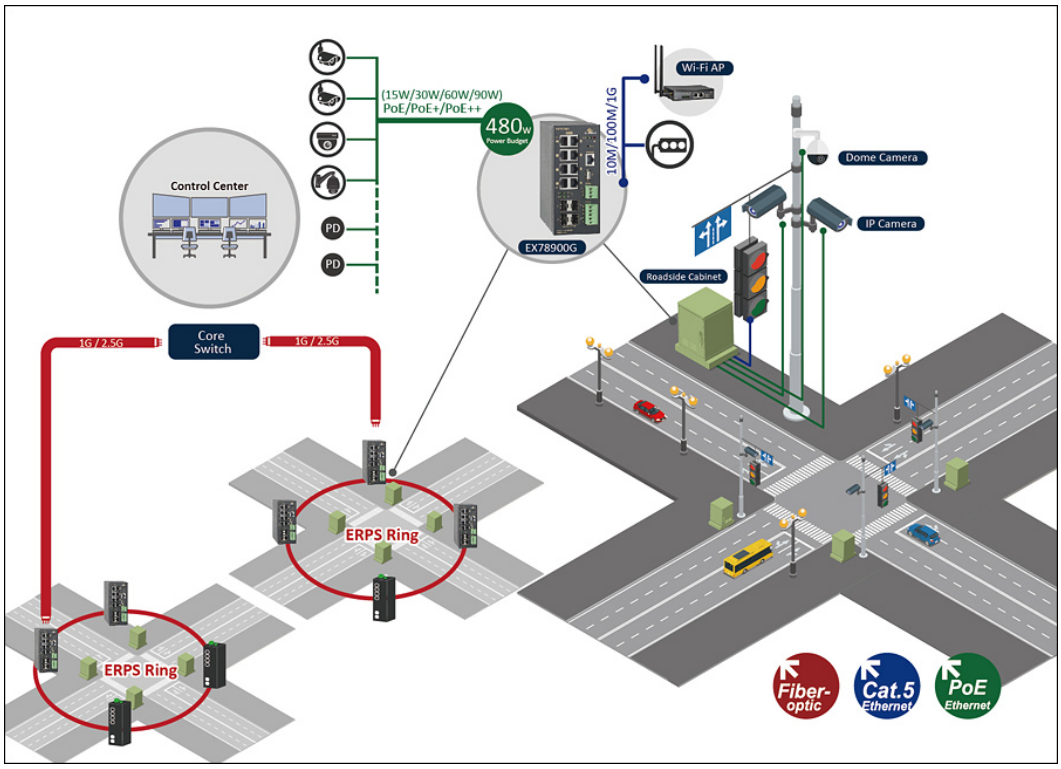
Cables

1 Console cable

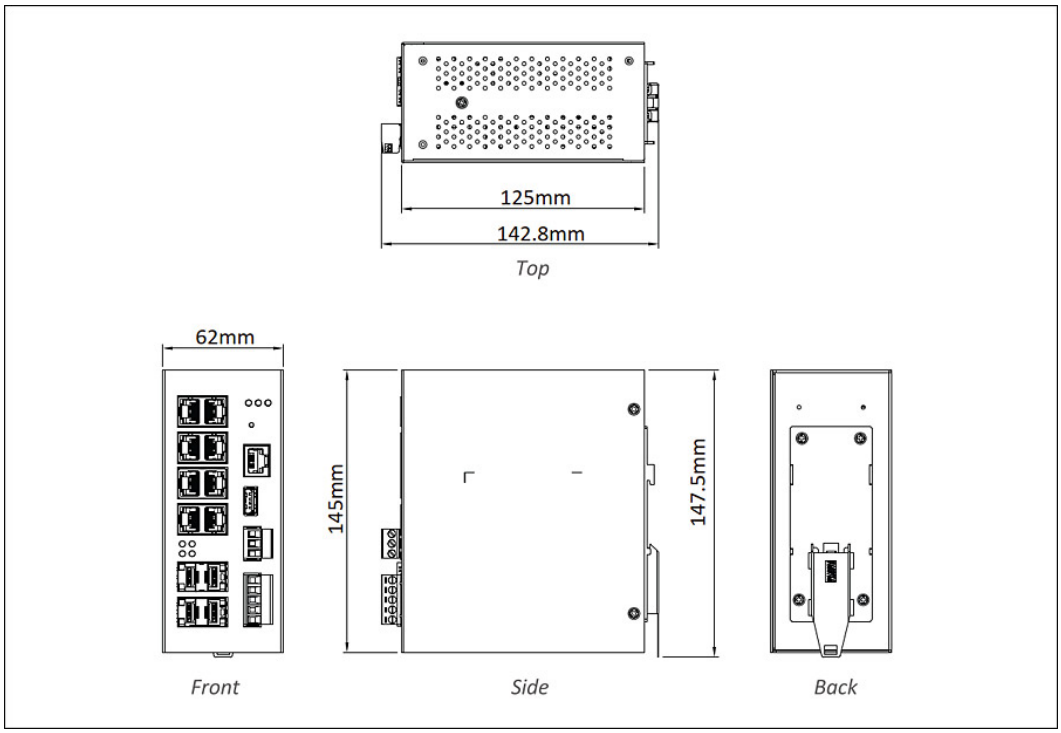
Installation

DIN-Rail mounting kit

応用例


(15W/30W/60W/90W)
PoE/PoE+/PoE++
480w
Power Budget
Wi-Fi AP
10M/100M/1G
Control Center
EX78900G
PD
PD
Dome Camera
IP Camera
Roadside Cabinet
1G / 2.5G
Core
Switch
1G / 2.5G
ERPS Ring
ERPS Ring
Fiber-
optic
Cat.5
Ethernet
PoE
Ethernet

寸法図



製品型番

Model

			
	EX78924G-XYZ	**EX78922G-XYZ**	**EX78912G-XYZ**
10/100/1000BASE TX	8	8	8
100/1000/2500BASE SFP	4	2	2
supports PoE++	8	8	4
PoE per port		90W	
Conformal Coating	N/A	N/A	N/A
	Quote	Quote	Quote

Model (Conformal Coating)

			
	EX78924G-XYZCC	**EX78922G-XYZCC**	**EX78912G-XYZCC**
10/100/1000BASE TX	8	8	8
100/1000/2500BASE SFP	4	2	2
supports PoE++	8	8	4
PoE per port		90W	
Conformal Coating	✓	✓	✓
	Quote	Quote	Quote

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

Conformal Coating (CC)

CC	Conformal Coating

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/jp/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/jp/products/din-rail-power-supply.

Mounting Kits

Part Name	Description	Image
KP-AA96-480	Panel Mounting Adapter	
KP-BK78900G	Panel Mounting Bracket	
KR-BK71000	Rack Mounting Bracket	

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