

EDS-G4012 系列

12G 埠 (選購 8 個 802.3bt PoE 連接埠) 全 Gigabit 網管型乙太網路交換器



特色與優點

- 支援 IEEE 802.3bt PoE，每個連接埠可支援最高 90 W 輸出
- 光纖 SFP 插槽支援高達 2.5 Gbps 的頻寬，因此提升頻寬能力。
- Turbo Ring 與 Turbo Chain (復原時間 <50 毫秒 @ 250 台交換器)，以及透過 RSTP/STP 協議支援網路備援
- 寬範圍電源輸出，可提供彈性部署
- 輕巧靈活的外殼設計，適合狹小空間。
- 支援 MXstudio，輕鬆實現可視化的工業網路管理
- IEC 62443-4-2 安全等級 2 認證
- 海事網路安全認證 (IACS UR E27 Rev.1、IEC 61162-460 Ed.3.0 for switch role)

認證



簡介

EDS-G4012 系列配備 12 個 Gigabit 乙太網路埠以及最多四個 1 Gbps 或 2.5 Gbps 光纖連接埠，因此非常適合用於將現有網路升級至 Gigabit 速度，或用於建立新的全 Gigabit 骨幹。Gigabit 傳輸速度可增加頻寬以提供更高效能，並且透過三合一服務快速地在網路間傳輸大量資料。此系列產品也配備八個符合 10/100/1000BaseT(X) 802.3af (PoE)、802.3at (PoE) 和 802.3bt 標準的乙太網路埠選項，用於連接高頻寬 PoE 設備。

備援乙太網路技術 (例如 Turbo Ring、Turbo Chain 和 RSTP/STP) 可增加系統的可靠性，並且改善網路骨幹的可用性。EDS-G4012 系列是專門為嚴苛的應用所設計 (例如視訊與流程監控、ITS 和 DCS 系統)，所有應用都可從可擴充的骨幹結構中獲益。

IEC 62443-4-2 安全等級 2 認證

EDS-(G)4000 系列型號通過 IEC 62443-4-2 安全等級 2 認證 (<https://certificates.iecee.org/#/deliverables/CERT/1605016/view>)，幫助我們的客戶滿足安全工業網路的要求。

規格

Ethernet Interface

10/100/1000BaseT(X) Ports (RJ45 connector)	EDS-G4012-4GC-HV/-LV/-T models: 8 Auto MDI/MDI-X connection Auto negotiation speed Full/Half duplex mode
Combo Ports (10/100/1000BaseT(X) or 100/1000BaseSFP)	EDS-G4012-4GC-LV/-HV/-T models: 4
PoE Ports (10/100/1000BaseT(X), RJ45 connector)	EDS-G4012-8P-4QGS-LVA/-LVB/-T models: 8

1000/2500BaseSFP Ports	EDS-G4012-8P-4QGS-LVA/-LVB/-T models: 4
Standards	IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseT(X) and 100BaseFX IEEE 802.3ab for 1000BaseT(X) IEEE 802.3z for 1000BaseX IEEE 802.3bz for 2.5GBaseX IEEE 802.3x for flow control IEEE 802.3ad for Port Trunk with LACP IEEE 802.1Q for VLAN Tagging IEEE 802.1D-2004 for Spanning Tree Protocol IEEE 802.1w for Rapid Spanning Tree Protocol IEEE 802.1p for Class of Service IEEE 802.1X for authentication

Ethernet Software Features

Industrial Protocols	EtherNet/IP Modbus TCP PROFINET IO Device
Management	IPv4/IPv6 Flow control Back Pressure Flow Control DHCP Server/Client ARP RARP LLDP Port Mirroring (SPAN, RSPAN) Linkup Delay SMTP SNMP Trap SNMP Inform SNMPv1/v2c/v3 RMON TFTP SFTP HTTP HTTPS Telnet Syslog Private MIB Fiber check
Filter	GMRP GVRP GARP 802.1Q VLAN IGMP Snooping v1/v2/v3 IGMP Querier
Redundancy Protocols	STP RSTP Turbo Ring v2 Turbo Chain Ring Coupling Dual-Homing MRP Link Aggregation MSTP
Security	Broadcast storm protection Rate Limit Trust access control Static Port Lock MAC Sticky HTTPS/SSL SSH RADIUS TACACS+ Login and Password Policy Access control list DHCP Snooping

Time Management	SNTP NTP Server/Client NTP Authentication IEEE 1588v2 PTP (hardware-based) Supported power profiles: IEEE 1588 Default 2008, IEC 61850-9-3-2016, IEEE C37.238-2017
Protocols	IPv4/IPv6 TCP/IP UDP ICMP ARP RARP TFTP DNS NTP Client DHCP Server DHCP Client 802.1X QoS HTTPS HTTP Telnet SMTP SNMPv1/v2c/v3 RMON Syslog
MIB	P-BRIDGE MIB Q-BRIDGE-MIB IEEE8021-SPANNING-TREE-MIB IEEE8021-PAE-MIB IEEE8023-LAG-MIB LLDP-EXT-DOT1-MIB LLDP-EXT-DOT3-MIB SNMPv2-MIB RMON MIB Groups 1, 2, 3, 9

Switch Properties

MAC Table Size	16 K
Jumbo Frame Size	9.216 KB
Max. No. of VLANs	256
VLAN ID Range	VID 1 to 4094
IGMP Groups	512
Priority Queues	4
Packet Buffer Size	1 MB

LED Interface

LED Indicators	PWR1, PWR2, STATE, FAULT, MSTR/HEAD, CPLR/TAIL, SYNC
----------------	--

Serial Interface

Console Port	RS-232 (TxD, RxD, GND), 8-pin RJ45 (115200, n, 8, 1)
--------------	--

USB Interface

USB Connector	USB Type A (Reserved)
---------------	-----------------------

Input/Output Interface

Alarm Contact Channels	1, Relay output with current carrying capacity of 1 A @ 24 VDC
Digital Input Channels	1

Digital Inputs	+13 to +30 V for state 1 -30 to +3 V for state 0 Max. input current: 8 mA
Buttons	Reset button

DIP Switch Configuration

DIP Switches	Turbo Ring, Master, Coupler, Reserve
--------------	--------------------------------------

Power Parameters

Connection	2 removable 4-contact terminal block(s)
Pre-installed Power Module	-LV/-LV-T models: PWR-100-LV -HV/-HV-T models: PWR-105-HV-I -LVA/-LVA-T models: PWR-101-LV-BP-I -LVB/-LVB-T models: PWR-103-LV-VB-I
Note	The EDS-G4012 Series supports modular power supplies. The model names and power parameters are determined by the installed power module. For example: EDS-G4012-4GC-T + PWR-100-LV = EDS-G4012-4GC-LV-T EDS-G4012-4GC-T + PWR-105-HV-I = EDS-G4012-4GC-HV-T If you install a different power module, refer to the specifications of the corresponding model. For example, if you replace the power module of the EDS-G4012-4GC-LV-T with the PWR-105-HV-I, refer to the specifications of the EDS-G4012-4GC-HV-T.
Input Voltage	-LV/-LV-T models: 12/24/48 VDC, Redundant dual inputs -HV/-HV-T models: 110/220 VDC/VAC, Single input -LVA/-LVA-T models: 48 VDC, Redundant dual inputs -LVB/-LVB-T models: 12/24/48 VDC, Redundant dual inputs
Operating Voltage	-LV/-LV-T models: 9.6 to 60 VDC -HV/-HV-T models: 88 to 300 VDC, 85 to 264 VAC -LVA/-LVA-T models: 44 to 57 VDC (>52 VDC for PoE+ output recommended) -LVB/-LVB-T models: 12 to 57 VDC (>52 VDC for PoE+ output recommended)
Input Current	-LV/-LV-T models: 12-48 VDC, 1.50-0.40 A or 24 VDC, 0.70 A -HV/-HV-T models: 110-220 VAC, 50-60 Hz, 0.30-0.20 A or 110-220 VDC, 0.30-0.20 A -LVA/-LVA-T models: 48 VDC, 5.42 A -LVB/-LVB-T models: 12/48 VDC, 7.46/4.27 A or 24 VDC, 7.26 A
Power Consumption (Max.)	EDS-G4012-4GC-LV(-T) models: 12.68 W EDS-G4012-4GC-HV(-T) models: 15.8 W EDS-G4012-8P-4QGS-LVA(-T) models: Without PoE: 15.58 W With PoE: Max. 240 W for total PD power consumption @ 48 VDC input EDS-G4012-8P-4QGS-LVB(-T) models: Without PoE: 17.96 W With PoE: Max. 180 W for total PD power consumption @ 48 VDC input; Max. 150 W for total PD power consumption @ 24 VDC input; Max. 62 W for total PD power consumption @ 12 VDC input
Max. PoE Power Output per Port	90 W
Overload Current Protection	Supported
Reverse Polarity Protection	Supported

Physical Characteristics

IP Rating	IP40
Dimensions	55 x 140 x 122.5 mm (2.17 x 5.51 x 4.82 in)

Weight	EDS-G4012-4GC(-T) models: 881.5 g (1.94 lb) EDS-G4012-8P-4QGS(-T) models: 972 g (2.14 lb)
Installation	DIN-rail mounting Wall mounting (with optional kit)
Housing	Metal

Environmental Limits

Operating Temperature	Standard Models: -10 to 60°C (14 to 140°F) Wide Temp. Models: -40 to 75°C (-40 to 167°F)
Storage Temperature (package included)	-40 to 85°C (-40 to 185°F)
Ambient Relative Humidity	5 to 95% (non-condensing)

Standards and Certifications

EMC	EN 55032/35 EN 61000-6-2/-6-4
EMI	CISPR 32, FCC Part 15B Class A
EMS	IEC 61000-4-2 ESD: Contact: 8 kV; Air: 15 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 20 V/m IEC 61000-4-4 EFT: Power: 4 kV; Signal: 4 kV IEC 61000-4-5 Surge: Power: 4 kV; Signal: 4 kV IEC 61000-4-6 CS: 10 V IEC 61000-4-8 PFMF
Cybersecurity	IEC 62443-4-2 Security Level 2 IEC 61162-460 (switch role)
Safety	UL 61010-2-201 EN 62368-1 (LVD)
Maritime	-LV/-LV-T, -LVB/-LVB-T models: DNV, ABS, NK, LR
Vibration	IEC 60068-2-6
Shock	IEC 60068-2-27
Freefall	IEC 60068-2-32
Railway	EN 50121-4
Traffic Control	NEMA TS2
Power Substation	IEC 61850-3 IEEE 1613 Class 1
Hazardous Locations	-LV/-LV-T models: ATEX IECEX Class I Division 2

MTBF

Time	EDS-G4012-4GC-HV/HV-T: 456,870 hrs EDS-G4012-4GC-LV/LV-T: 867,981 hrs EDS-G4012-8P-4QGS-LVA/LVA-T: 799,780 hrs EDS-G4012-8P-4QGS-LVB/LVB-T: 759,924 hrs
Standards	Telcordia Standard SR-332

Warranty

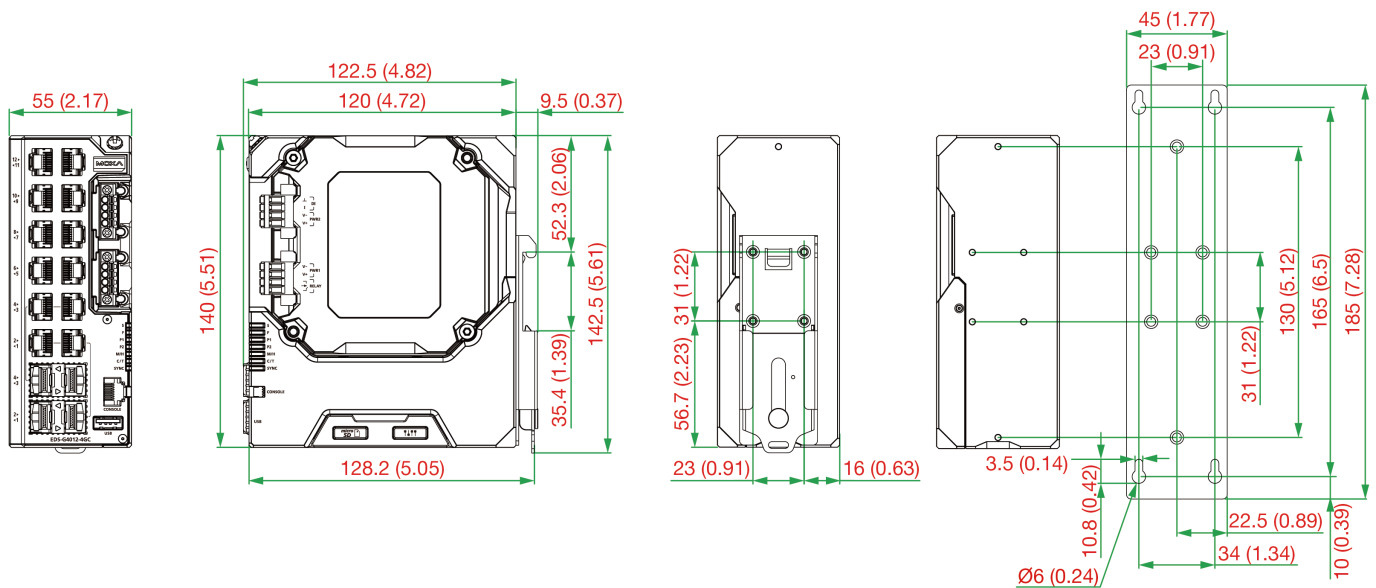
Warranty Period	5 years
Details	See www.moxa.com/tw/warranty

Package Contents

Device	1 x EDS-G4012 Series switch
Documentation	1 x quick installation guide 1 x product notice, Simplified Chinese 1 x product certificates of quality inspection, Simplified Chinese 1 x warranty card

尺寸

單位：公釐（英吋）



訂購資訊

Model Name	10/100/1000BaseT(X) Ports, RJ45 Connector	Combo Ports (10/100/1000BaseT(X) or 100/1000BaseSFP)	PoE 10/100/1000BaseT(X) Ports, RJ45 Connector	1000/2500BaseSFP Ports	Operating Voltage	Pre-installed Power Module	Operating Temp.
EDS-G4012-4GC-LV	8	4	–	–	9.6 to 60 VDC	PWR-100-LV	-10 to 60°C
EDS-G4012-4GC-LV-T	8	4	–	–	9.6 to 60 VDC	PWR-100-LV	-40 to 75°C
EDS-G4012-4GC-HV	8	4	–	–	88 to 300 VDC, 85 to 264 VAC	PWR-105-HV-I	-10 to 60°C
EDS-G4012-4GC-HV-T	8	4	–	–	88 to 300 VDC, 85 to 264 VAC	PWR-105-HV-I	-40 to 75°C
EDS-G4012-8P-4QGS-LVA	–	–	8	4	44 to 57 VDC (> 52 VDC for PoE + input recommended)	PWR-101-LV-BP-I	-10 to 60°C
EDS-G4012-8P-4QGS-LVA-T	–	–	8	4	44 to 57 VDC (> 52 VDC for PoE + input recommended)	PWR-101-LV-BP-I	-40 to 75°C

SFP-1G20ALC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 20 km transmission; TX 1310 nm, RX 1550 nm, 0 to 60°C operating temperature
SFP-1G20BLC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 20 km transmission; TX 1550 nm, RX 1310 nm, 0 to 60°C operating temperature
SFP-1G40ALC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 40 km transmission; TX 1310 nm, RX 1550 nm, 0 to 60°C operating temperature
SFP-1G40BLC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 40 km transmission; TX 1550 nm, RX 1310 nm, 0 to 60°C operating temperature
SFP-1G10ALC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 10 km transmission; TX 1310 nm, RX 1550 nm, -40 to 85°C operating temperature
SFP-1G10BLC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 10 km transmission; TX 1550 nm, RX 1310 nm, -40 to 85°C operating temperature
SFP-1G20ALC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 20 km transmission; TX 1310 nm, RX 1550 nm, -40 to 85°C operating temperature
SFP-1G20BLC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 20 km transmission; TX 1550 nm, RX 1310 nm, -40 to 85°C operating temperature
SFP-1G40ALC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 40 km transmission; TX 1310 nm, RX 1550 nm, -40 to 85°C operating temperature
SFP-1G40BLC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 40 km transmission; TX 1550 nm, RX 1310 nm, -40 to 85°C operating temperature
SFP-2.5GSLHLC-T	SFP module with 1 2.5GBaseFX port with LC connector, single-mode, for 45 km transmission, -40 to 85 °C operating temperature
SFP-2.5GSLC-T	SFP module with 1 2.5GBaseFX port with LC connector, single-mode, for 5 km transmission, -40 to 85 °C operating temperature
SFP-2.5GMLC-T	SFP module with 1 2.5GBaseFX port with LC connector, multi-mode, for 170, 200, 550, 600 m transmission, -40 to 85 °C operating temperature
SFP-2.5GLSLC-T	SFP module with 1 2.5GBaseFX port with LC connector, single-mode, for 20 km transmission, -40 to 85 °C operating temperature
SFP-1GTXRJ45-T	SFP module with 1 1000BaseT port with RJ45 connector for 100 m transmission, -40 to 75°C operating temperature

Power Supplies

HDR-60-24	60 W/2.5 A DIN-rail 24 VDC power supply, universal 85 to 264 VAC or 120 to 370 VDC input voltage, -30 to 70°C operating temperature
NDR-120-24	120 W/5.0 A DIN-rail 24 VDC power supply, universal 90 to 264 VAC or 127 to 370 VDC input voltage, -20 to 70°C operating temperature
NDR-120-48	120 W/2.5 A DIN-rail 48 VDC power supply, universal 90 to 264 VAC or 127 to 370 VDC input voltage, -20 to 70°C operating temperature
NDR-240-48	240 W/5.0 A DIN-rail 48 VDC power supply, universal 90 to 264 VAC or 127 to 370 VDC input voltage, -20 to 70°C operating temperature
MDR-40-24	DIN-rail 24 VDC power supply with 40W/1.7A, 85 to 264 VAC, or 120 to 370 VDC input, -20 to 70°C operating temperature
MDR-60-24	DIN-rail 24 VDC power supply with 60W/2.5A, 85 to 264 VAC, or 120 to 370 VDC input, -20 to 70°C operating temperature

Software

LIC-MXviewOne-NEW-XN-SR	MXview One node license with customizable node quantity (minimum 1 node)
-------------------------	--

© Moxa Inc. 版權所有。2026 年 5 月 29 日更新。

未經 Moxa Inc. 明確書面許可，不得以任何方式複製或使用本文件及其任何部分。產品規格如有變更，恕不另行通知。請至本公司官網了解最新的產品資訊。