

EDS-G512E 系列

12G 埠 (含 8 PoE+ 連接埠選項) 全 Gigabit 網管型乙太網路交換器



特色與優點

- 8 個 IEEE 802.3af 與 IEEE 802.3at PoE+ 標準連接埠
- 每個 PoE+ 連接埠在高功率模式下為 36 瓦輸出
- 支援 Turbo Ring 和 Turbo Chain (復原時間 <50 毫秒 @ 250 台交換器)，以及透過 RSTP/STP 和 MSTP 協議支援網路備援
- RADIUS、TACACS+、MAB Authentication、SNMPv3、IEEE 802.1X、MAC ACL、HTTPS、SSH 和綁訂 MAC 位址可提高網路安全
- 支援 EtherNet/IP、PROFINET 和 Modbus TCP 通訊協定以進行裝置管理與監控
- 支援 MXstudio，輕鬆實現可視化的工業網路管理
- V-ON™ 可確保毫秒等級的 Multicast 資料和視訊網路復原

認證



簡介

EDS-G512E 系列配備有 12 個 Gigabit 乙太網路連接埠以及最多 4 個光纖連接埠，使其非常適合用於將現有網路升級至 Gigabit 速度，或是建立新的全 Gigabit 骨幹。其也隨附 8 個符合 10/100/1000BaseT(X)、802.3af (PoE) 與 802.3at (PoE+) 標準的乙太網路連接埠選項，可連接高頻寬 PoE 裝置。Gigabit 傳輸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。

備援乙太網路技術 (例如 Turbo Ring、Turbo Chain、RSTP/STP 和 MSTP) 可增加系統的可靠性，並且改善網路骨幹的可用性。EDS-G512E 系列是專門為通訊需求的應用所設計 (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架構中獲益。

附加特色與優點

- 命令列介面 (CLI) 快速設定主要網管功能
- 進階 PoE 管理功能 (PoE 連接埠設定、PD 故障檢查以及 PoE 排程)
- DHCP Option 82 適用於以不同原則指派 IP 位址
- 支援 EtherNet/IP、PROFINET 及 Modbus TCP 通訊協定，便於進行設備管理和監控
- IGMP snooping 和 GMRP，用於篩選多點傳送流量
- 可基於連接埠實現 VLAN、IEEE 802.1Q VLAN 以及 GVRP，以簡化網路規劃
- 支援 ABC-02-USB (自動備份配置器) 以進行系統配置備份/還原與韌體升級
- Port mirroring 可用於除錯
- QoS (IEEE 802.1p/1Q 和 TOS/DiffServ) 提高可靠性
- 網路埠端口聚合功能提供最佳頻寬使用率
- RADIUS、TACACS+、MAB Authentication、SNMPv3、IEEE 802.1X、MAC ACL、HTTPS、SSH 和 sticky MAC address 可提高網路安全
- SNMPv1/v2c/v3，適用不同層級的網路管理
- RMON 提供主動且有效率的網路監控
- 頻寬管理可防止無法預測的網路狀態
- 鎖定連接埠功能可根據 MAC 位址封鎖未經授權的存取
- 發生例外狀況時透過電子郵件和繼電器輸出自動發出警告

規格

Input/Output Interface

Alarm Contact Channels	1 Relay output with current carrying capacity of 1 A @ 24 VDC
Buttons	Reset button

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

Ethernet Interface

10/100/1000BaseT(X) Ports (RJ45 connector)	EDS-G512E-4GSFP: 8 Auto negotiation speed Full/Half duplex mode Auto MDI/MDI-X connection EDS-G512E-4GSFP-T: 8 Auto negotiation speed Full/Half duplex mode Auto MDI/MDI-X connection
PoE Ports (10/100/1000BaseT(X), RJ45 connector)	EDS-G512E-8PoE-4GSFP: 8 EDS-G512E-8PoE-4GSFP-T: 8
100/1000BaseSFP Slots	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 1000BaseSX/LX/LHX/ZX IEEE 802.3x for flow control IEEE 802.1D-2004 for Spanning Tree Protocol IEEE 802.1w for Rapid Spanning Tree Protocol IEEE 802.1s for Multiple Spanning Tree Protocol IEEE 802.1p for Class of Service IEEE 802.1Q for VLAN Tagging IEEE 802.1X for authentication IEEE 802.3ad for Port Trunk with LACP

Ethernet Software Features

Filter	802.1Q VLAN BPDU Filter BPDU Guard GMRP GVRP IGMP v1/v2/v3 Port-based VLAN
Industrial Protocols	EtherNet/IP Modbus TCP PROFINET IO Device
Management	LLDP Back Pressure Flow Control BOOTP Port Mirror DHCP Option 66/67/82 DHCP Server/Client Fiber check Flow control IPv4/IPv6 RARP RMON SCP SMTP SNMP Inform SNMPv1/v2c/v3 Syslog Telnet TFTP
MIB	Ethernet-like MIB MIB-II Bridge MIB P-BRIDGE MIB

	Q-BRIDGE MIB RMON MIB Groups 1, 2, 3, 9 RSTP MIB
Redundancy Protocols	Link Aggregation MRP MSTP RSTP STP Turbo Chain Turbo Ring v1/v2
Security	Broadcast storm protection HTTPS/SSL TACACS+ SNMPv3 MAB authentication Sticky MAC NTP authentication IP ACL MAC ACL Port Lock RADIUS SSH SMTP with TLS
Time Management	NTP Server/Client SNTP

Switch Properties

IGMP Groups	2048
Jumbo Frame Size	9.6 KB
MAC Table Size	8 K
Max. No. of VLANs	256
Packet Buffer Size	4 Mbits
Priority Queues	4
VLAN ID Range	VID 1 to 4094

USB Interface

Storage Port	USB Type A
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LED Interface

LED Indicators	PWR1, PWR2, STATE, FAULT, 10/100M (TP port), 1000M (TP port), 100/1000M (SFP port), MSTR/HEAD, CPLR/TAIL, smart PoE LED (EDS-G512E-8PoE-4GSFP Series only)
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Serial Interface

Console Port	USB-serial console (Type B connector)
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DIP Switch Configuration

DIP Switches	Turbo Ring, Master, Coupler, Reserve
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Power Parameters

Connection	2 removable 4-contact terminal block(s)
Input Current	EDS-G512E-4GSFP models: 0.34 A @ 24 VDC EDS-G512E-8PoE-4GSFP models: 5.30 A @ 48 VDC
Input Voltage	EDS-G512E-4GSFP models: 12/24/48/-48 VDC EDS-G512E-8PoE-4GSFP models: 48 VDC

	Redundant dual inputs
Operating Voltage	EDS-G512E-4GSFP models: 9.6 to 60 VDC EDS-G512E-8PoE-4GSFP models: 44 to 57 VDC (> 50 VDC for PoE+ output recommended)
Overload Current Protection	Supported
Reverse Polarity Protection	Supported
Power Budget	EDS-G512E-8PoE-4GSFP: Max. 240 W for total PD consumption EDS-G512E-8PoE-4GSFP: Max. 36 W for each PoE port
Power Consumption (Max.)	EDS-G512E-8PoE-4GSFP: Max. 14.36 W full loading without PDs' consumption EDS-G512E-8PoE-4GSFP-T: Max. 14.36 W full loading without PDs' consumption EDS-G512E-8PoE-4GSFP: When selecting a power supply, check the PD power consumption. EDS-G512E-8PoE-4GSFP-T: When selecting a power supply, check the PD power consumption.

Physical Characteristics

Housing	Metal
IP Rating	IP30
Dimensions	79.2 x 135 x 137 mm (3.1 x 5.3 x 5.4 in)
Weight	EDS-G512E-4GSFP: 1,440 g (3.18 lb) EDS-G512E-8PoE-4GSFP: 1,540 g (3.40 lb)
Installation	DIN-rail mounting Wall mounting (with optional kit)

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

Safety	EDS-G512E-4GSFP/EDS-G512E-8PoE-4GSFP models: UL 508 EDS-G512E-8PoE-4GSFP models: EN 62368-1
EMC	EN 61000-6-2/-6-4
EMI	FCC Part 15B Class A
EMS	EDS-G512E-4GSFP: IEC 61000-4-2 ESD: Contact: 8 kV; Air: 15 kV EDS-G512E-4GSFP: IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m EDS-G512E-8PoE-4GSFP: IEC 61000-4-3 RS: 80 MHz to 1 GHz: 20 V/m EDS-G512E-4GSFP-T: IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m EDS-G512E-8PoE-4GSFP-T: IEC 61000-4-3 RS: 80 MHz to 1 GHz: 20 V/m EDS-G512E-4GSFP: IEC 61000-4-4 EFT: Power: 4 kV; Signal: 4 kV EDS-G512E-8PoE-4GSFP: IEC 61000-4-4 EFT: Power: 2 kV; Signal: 2 kV EDS-G512E-8PoE-4GSFP-T: IEC 61000-4-4 EFT: Power: 2 kV; Signal: 2 kV EDS-G512E-4GSFP-T: IEC 61000-4-4 EFT: Power: 4 kV; Signal: 4 kV EDS-G512E-4GSFP: IEC 61000-4-5 Surge: Power: 4 kV; Signal: 4 kV EDS-G512E-8PoE-4GSFP: IEC 61000-4-5 Surge: Power: 2 kV; Signal: 4 kV EDS-G512E-4GSFP: IEC 61000-4-5 Surge: Power: 4 kV; Signal: 4 kV EDS-G512E-4GSFP-T: IEC 61000-4-5 Surge: Power: 4 kV; Signal: 4 kV EDS-G512E-8PoE-4GSFP: IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV EDS-G512E-8PoE-4GSFP-T: IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV IEC 61000-4-6 CS: 10 V IEC 61000-4-8 PFMF
Hazardous Locations	EDS-G512E-4GSFP Series: ATEX, Class I Division 2

Power Substation	IEC 61850-3 IEEE 1613
Railway	EN 50121-4
Traffic Control	NEMA TS2
Vibration	IEC 60068-2-6
Shock	IEC 60068-2-27
Freefall	IEC 60068-2-32
Maritime	EDS-G512E-4GSFP models: DNV, LR, ABS, NK

MTBF

Time	EDS-G512E-4GSFP(-T) models: 803,337 hrs EDS-G512E-8PoE-4GSFP(-T) models: 788,215 hrs
Standards	Telcordia (Bellcore), GB

Warranty

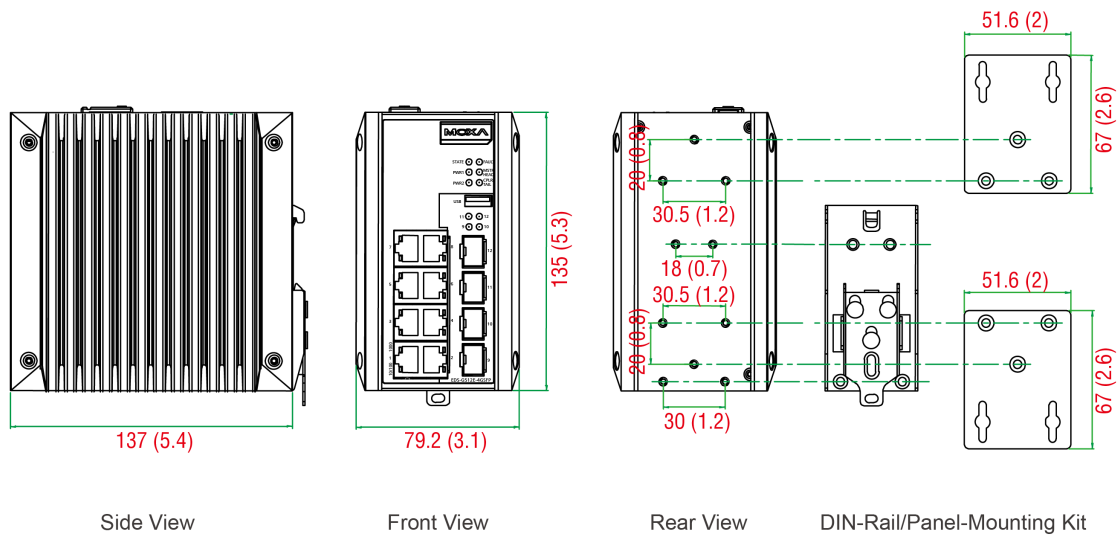
Warranty Period	5 years
Details	See www.moxa.com/tw/warranty

Package Contents

Device	1 x EDS-G512E Series switch
Cable	1 x USB type A male to USB type B male
Installation Kit	4 x cap, plastic, for RJ45 port
Documentation	1 x quick installation guide 1 x warranty card 1 x product certificates of quality inspection, Simplified Chinese 1 x product notice, Simplified Chinese
Note	SFP modules need to be purchased separately for use with this product.

尺寸

單位：公釐（英吋）



訂購資訊

Model Name	10/100/1000BaseT(X) Ports, RJ45 Connector	PoE Ports, 10/100/1000BaseT(X), RJ45 Connector	IEEE 802.3af/at for PoE/PoE+ Output	100/1000Base SFP Slots	Operating Temp.
EDS-G512E-4GSFP	8	–	–	4	-10 to 60°C
EDS-G512E-4GSFP-T	8	–	–	4	-40 to 75°C
EDS-G512E-8PoE-4GSFP	–	8	P	4	-10 to 60°C
EDS-G512E-8PoE-4GSFP-T	–	8	P	4	-40 to 75°C

配件 (選購)

Storage Kits

ABC-02-USB	Configuration backup and restoration tool, firmware upgrade, and log file storage tool for managed Ethernet switches and routers, 0 to 60°C operating temperature
ABC-02-USB-T	Configuration backup and restoration tool, firmware upgrade, and log file storage tool for managed Ethernet switches and routers, -40 to 75°C operating temperature

Power Supplies

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
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

Rack-Mounting Kits

RK-4U	19-inch rack-mounting kit
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Wall-Mounting Kits

WK-51-01	Wall mounting kit with 2 plates (51.6 x 67 x 2 mm) and 6 screws
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SFP Modules

SFP-1FELLC-T	SFP module with 1 100Base single-mode with LC connector for 80 km transmission, -40 to 85°C operating temperature
SFP-1FEMLC-T	SFP module with 1 100Base multi-mode, LC connector for 2/4 km transmission, -40 to 85°C operating temperature
SFP-1FESLC-T	SFP module with 1 100Base single-mode with LC connector for 40 km transmission, -40 to 85°C operating temperature
SFP-1G10ALC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 10 km transmission; TX 1310 nm, RX 1550 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	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 10 km transmission; TX 1550 nm, RX 1310 nm, 0 to 60°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	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

