

EDS-518E 系列

14+4G 埠 Gigabit 網管型乙太網路交換器



特色與優點

- 4 個 Gigabit 連接埠加 14 個快速乙太網路連接埠，銅質纜線和光纖纜線適用
- 支援 Turbo Ring 和 Turbo Chain (對於 250 台交換器，復原時間 < 20 ms)，¹，RSTP/STP 和 MSTP，實現網路備援
- RADIUS、TACACS+、MAB 驗證、SNMPv3、IEEE 802.1X、MAC ACL、HTTPS、SSH 和 sticky MAC-addresses，以加強網路安全性
- 基於 IEC 62443 的資安防護功能
- 支援 EtherNet/IP、PROFINET 和 Modbus/TCP 通訊協定，便於進行設備管理和監控
- Fiber Check™—對 MST/MSC/SSC/SFP 光纖連接埠進行全面的光纖狀態監控並發出警示
- 支援 MXstudio，輕鬆進行視覺化工業網路管理
- 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-518E 系列是一種獨立精巧的 18 埠網管型乙太網路交換器，提供內建 RJ45 或 SFP 插槽的 4 個 combo Gigabit 連接埠，可供 Gigabit 光纖通訊之用。14 個快速乙太網路連接埠採用各種銅質和光纖連接埠組合，在設計網路和應用時可更彈性地使用 EDS-518E 系列。乙太網路備援技術 Turbo Ring、Turbo Chain、RSTP/STP 和 MSTP 可提升網路骨幹的系統可靠性和可用性。EDS-518E 還支援進階管理和安全功能。

此外，EDS-518E 系列的設計特別適合安裝空間有限而對於防護等級要求相當高的嚴苛工業環境，例如，海運、鐵路沿線、石油和天然氣、工廠自動化及過程自動化。

附加特色與優點

- 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 VVRP，以簡化網路規劃
- 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
- 連接埠監控可用於線上除錯
- 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
- 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
- Fiber Check™ 提供完整的光纖數位診斷監控 (DDM) 功能，以及 MST/MSC/SSC/SFP 光纖連接埠的事件警告
- 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
- 支援 ABC-02-USB (自動備份設定工具)，用於系統配置備份/還原及韌體升級

規格

Input/Output Interface

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

1. Gigabit 乙太網路復原時間 < 50 ms

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

10/100BaseT(X) Ports (RJ45 connector)	EDS-518E-4GTXSFP: 14 EDS-518E-MM-SC-4GTXSFP/MM-ST-4GTXSFP/SS-SC-4GTXSFP: 12 All models support: Auto negotiation speed Full/Half duplex mode Auto MDI/MDI-X connection					
Combo Ports (10/100/1000BaseT(X) or 100/1000BaseSFP+)	4					
10/100/1000BaseT(X) Ports (RJ45 connector)	Auto negotiation speed Full/Half duplex mode Auto MDI/MDI-X connection					
100BaseFX Ports (multi-mode SC connector)	EDS-518E-MM-SC-4GTXSFP Series: 2					
100BaseFX Ports (multi-mode ST connector)	EDS-518E-MM-ST-4GTXSFP Series: 2					
100BaseFX Ports (single-mode SC connector)	EDS-518E-SS-SC-4GTXSFP Series: 2					
Optical Fiber			100BaseFX			
			Multi-Mode		Single-Mode	
			Fiber Cable Type	OM1	50/125 μm	G.652
					800 MHz x km	
	Typical Distance		4 km	5 km	40 km	
	Wavelength	Typical (nm)	1300		1310	
		TX Range (nm)	1260 to 1360		1280 to 1340	
		RX Range (nm)	1100 to 1600		1100 to 1600	
	Optical Power	TX Range (dBm)	-10 to -20		0 to -5	
		RX Range (dBm)	-3 to -32		-3 to -34	
		Link Budget (dB)	12		29	
		Dispersion Penalty (dB)	3		1	
	Note: When connecting a single-mode fiber transceiver, we recommend using an attenuator to prevent damage caused by excessive optical power. Note: Compute the “typical distance” of a specific fiber transceiver as follows: Link budget (dB) > dispersion penalty (dB) + total link loss (dB).					
	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, Port-based VLAN, GVRP, IGMP v1/v2/v3, GMRP
Industrial Protocols	EtherNet/IP, Modbus TCP, PROFINET IO Device (Slave)
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, 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, MSTP, RSTP, STP, Turbo Chain, Turbo Ring v1/v2
Security	Broadcast storm protection, HTTPS/SSL, TACACS+, SNMPv3, MAB authentication, Sticky MAC, NTP authentication, MAC ACL, Port Lock, RADIUS, SSH, SMTP with TLS
Time Management	NTP Server/Client, SNTP

Switch Properties

IGMP Groups	2048
MAC Table Size	16 K
Max. No. of VLANs	64
Packet Buffer Size	1 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), 100M (fiber port), Gigabit combo port, MSTR/HEAD, CPLR/TAIL
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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-518E-4GTXSFP Series: 0.37 A @ 24 VDC EDS-518E-MM-SC-4GTXSFP/MM-ST-4GTXSFP/SS-SC-4GTXSFP: 0.41 A @ 24 VDC
Input Voltage	12/24/48/-48 VDC, Redundant dual inputs
Operating Voltage	9.6 to 60 VDC
Overload Current Protection	Supported
Reverse Polarity Protection	Supported

Physical Characteristics

Housing	Metal
IP Rating	IP30

Dimensions	94 x 135 x 137 mm (3.7 x 5.31 x 5.39 in)
Weight	1518 g (3.35 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	UL 508, EN 60950-1 (LVD)
EMC	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: 10 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
Hazardous Locations	ATEX, Class I Division 2
Maritime	DNV-GL, LR, ABS, NK
Power Substation	IEC 61850-3, IEEE 1613
Railway	EN 50121-4
Traffic Control	NEMA TS2
Shock	IEC 60068-2-27
Freefall	IEC 60068-2-32
Vibration	IEC 60068-2-6

MTBF

Time	723,953 hrs
Standards	Telcordia (Bellcore), GB

Warranty

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

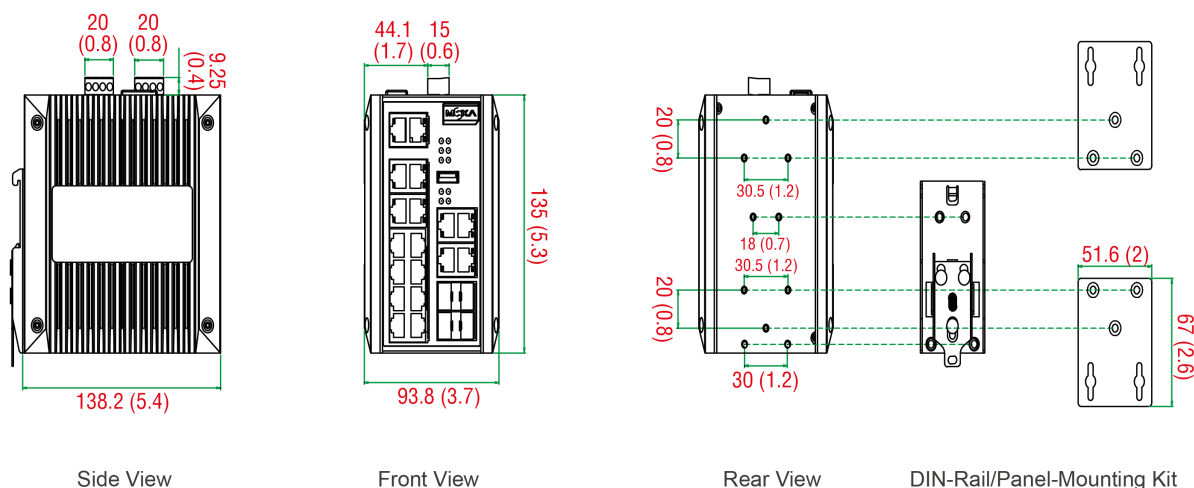
Package Contents

Device	1 x EDS-518E Series switch
Cable	1 x USB type A male to USB type B male
Installation Kit	4 x cap, plastic, for RJ45 port 4 x cap, plastic, for SFP slot

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	10/100BaseT(X) Ports RJ45 Connector	Combo Ports 10/100/ 1000BaseT(X) or 100/ 1000BaseSFP+	100BaseFX Ports Multi-Mode, SC Connector	100BaseFX Ports Multi-Mode, ST Connector	100BaseFX Ports Single-Mode, SC Connector	Operating Temp.
EDS-518E-4GTXSFP	14	4	–	–	–	-10 to 60°C
EDS-518E-4GTXSFP-T	14	4	–	–	–	-40 to 75°C
EDS-518E-MM-SC-4GTXSFP	12	4	2	–	–	-10 to 60°C
EDS-518E-MM-SC-4GTXSFP-T	12	4	2	–	–	-40 to 75°C
EDS-518E-MM-ST-4GTXSFP	12	4	–	2	–	-10 to 60°C
EDS-518E-MM-ST-4GTXSFP-T	12	4	–	2	–	-40 to 75°C
EDS-518E-SS-SC-4GTXSFP	12	4	–	–	2	-10 to 60°C
EDS-518E-SS-SC-4GTXSFP-T	12	4	–	–	2	-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

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 with LC connector for 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
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	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-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	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-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	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-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-1GEZXLC	SFP module with 1 1000BaseEZ port with LC connector for 110 km transmission, 0 to 60°C operating temperature
SFP-1GEZXLC-120	SFP module with 1 1000BaseEZ port with LC connector for 120 km transmission, 0 to 60°C operating temperature
SFP-1GLHLC	SFP module with 1 1000BaseLH port with LC connector for 30 km transmission, 0 to 60°C operating temperature
SFP-1GLHLC-T	SFP module with 1 1000BaseLH port with LC connector for 30 km transmission, -40 to 85°C operating temperature
SFP-1GLHXL	SFP module with 1 1000BaseLHX port with LC connector for 40 km transmission, 0 to 60°C operating temperature
SFP-1GLHXL-T	SFP module with 1 1000BaseLHX port with LC connector for 40 km transmission, -40 to 85°C operating temperature
SFP-1GLSXL	SFP module with 1 1000BaseLSX port with LC connector for 500 m transmission, 0 to 60°C operating temperature
SFP-1GLSXL-T	SFP module with 1 1000BaseLSX port with LC connector for 500 m transmission, -40 to 85°C operating temperature
SFP-1GLXL	SFP module with 1 1000BaseLX port with LC connector for 10 km transmission, 0 to 60°C operating temperature
SFP-1GLXL-T	SFP module with 1 1000BaseLX port with LC connector for 10 km transmission, -40 to 85°C operating temperature
SFP-1GSXL	SFP module with 1 1000BaseSX port with LC connector for 300/550 m transmission, 0 to 60°C operating temperature
SFP-1GSXL-T	SFP module with 1 1000BaseSX port with LC connector for 300/550 m transmission, -40 to 85°C operating temperature
SFP-1GZXLC	SFP module with 1 1000BaseZX port with LC connector for 80 km transmission, 0 to 60°C operating temperature

SFP-1GZXLC-T	SFP module with 1 1000BaseZX port with LC connector for 80 km transmission, -40 to 85°C operating temperature
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Wall-Mounting Kits

WK-51-01	Wall-mounting kit, 2 plates, 6 screws, 51.6 x 67 x 2 mm
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Software

MXview-50	Industrial network management software with a license for 50 nodes (by IP address)
MXview-100	Industrial network management software with a license for 100 nodes (by IP address)
MXview-250	Industrial network management software with a license for 250 nodes (by IP address)
MXview-500	Industrial network management software with a license for 500 nodes (by IP address)
MXview-1000	Industrial network management software with a license for 1000 nodes (by IP address)
MXview-2000	Industrial network management software with a license for 2000 nodes (by IP address)
MXview Upgrade-50	License expansion of MXview industrial network management software by 50 nodes (by IP address)

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