EDS-528E 系列

24+4G 埠 Gigabit 網管型乙太網路交換器



特色與優點

- 4 個 Gigabit 連接埠和 24 個快速乙太網路埠，適用於銅質纜線和光纖纜線
- 支援 Turbo Ring 和 Turbo Chain（復原時間 < 20 毫秒 @ 250 台交換器）[1]、RSTP/STP 和 MSTP 網路備援
- RADIUS、TACACS+、MAB Authentication、SNMPv3、IEEE 802.1X、MAC ACL、HTTPS、SSH 和黏性 MAC 位址，可加強網路安全性
- 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

IEC 61850-3 IEEE 1613 CE FC

簡介

EDS-528E 是一款獨立、精巧的 28 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 光纖通訊使用。24 個快速乙太網路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-528E 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-528E 還支援進階管理和安全功能。

此外，EDS-528E 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 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，用於過濾 multicast 流量
- 以連接埠為基礎的 VLAN、IEEE 802.1Q VLAN 以及 GVRP，用來簡化網路規劃
- QoS（IEEE 802.1p/1Q 和 TOS/DiffServ）提高可靠性
- Port Trunking 可將頻寬使用率最佳化
- SNMPv1/v2c/v3，支援不同層級的網路管理
- RMON 提供主動且有效率的網路監控
- 頻寬管理可預防不穩定的網路狀態出現
- 連接埠鎖定功能可依據 MAC 位址封鎖未經授權的存取
- 發生狀況時可透過電子郵件或是繼電器輸出自動發出告警
- 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

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

1. Gigabit 乙太網路斷線復連時間小於 50 毫秒

Ethernet Interface

10/100BaseT(X) Ports (RJ45 connector)	24 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
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 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

LED Interface

LED Indicators	PWR1, PWR2 (LV model), STATE, FAULT, 10/100M (TP port), Gigabit combo port, MSTR/HEAD, CPLR/TAIL

Serial Interface

Console Port	USB-serial console (Type B connector)

DIP Switch Configuration

DIP Switches	Turbo Ring, Master, Coupler, Reserve

Power Parameters

Connection	EDS-528E-4GTXSFP-HV Series: 1 removable 4-contact and 1 removable 5-contact terminal block EDS-528E-4GTXSFP-LV Series: 2 removable 4-contact terminal block(s)
Input Current	EDS-528E-4GTXSFP-LV Series: 0.47 A @ 24 VDC EDS-528E-4GTXSFP-HV Series: 0.11/0.055 A @ 110/220 VDC, 0.21/0.13 A @ 110/220 VAC
Input Voltage	EDS-528E-4GTXSFP-LV Series: 12/24/48/-48 VDC, Redundant dual inputs EDS-528E-4GTXSFP-HV Series: 110/220 VDC/VAC, Single input
Operating Voltage	EDS-528E-4GTXSFP-LV Series: 9.6 to 60 VDC EDS-528E-4GTXSFP-HV Series: 88 to 300 VDC, 85 to 264 VAC
Overload Current Protection	Supported
Reverse Polarity Protection	Supported

Physical Characteristics

Housing	Metal
IP Rating	IP30
Dimensions	115.4 x 135 x 137 mm (4.54 x 5.31 x 5.39 in)
Weight	1850 g (4.08 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 61010-2-201 EN 62368-1
EMC	EN 61000-6-2/-6-4 EN 55032/35
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
Power Substation	IEC 61850-3 IEEE 1613
Shock	IEC 60068-2-27
Freefall	IEC 60068-2-32
Vibration	IEC 60068-2-6

MTBF

Time	EDS-528E-4GTXSFP-HV: 808,428 hrs EDS-528E-4GTXSFP-LV: 774,632 hrs
Standards	Telcordia (Bellcore), GB

Warranty

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

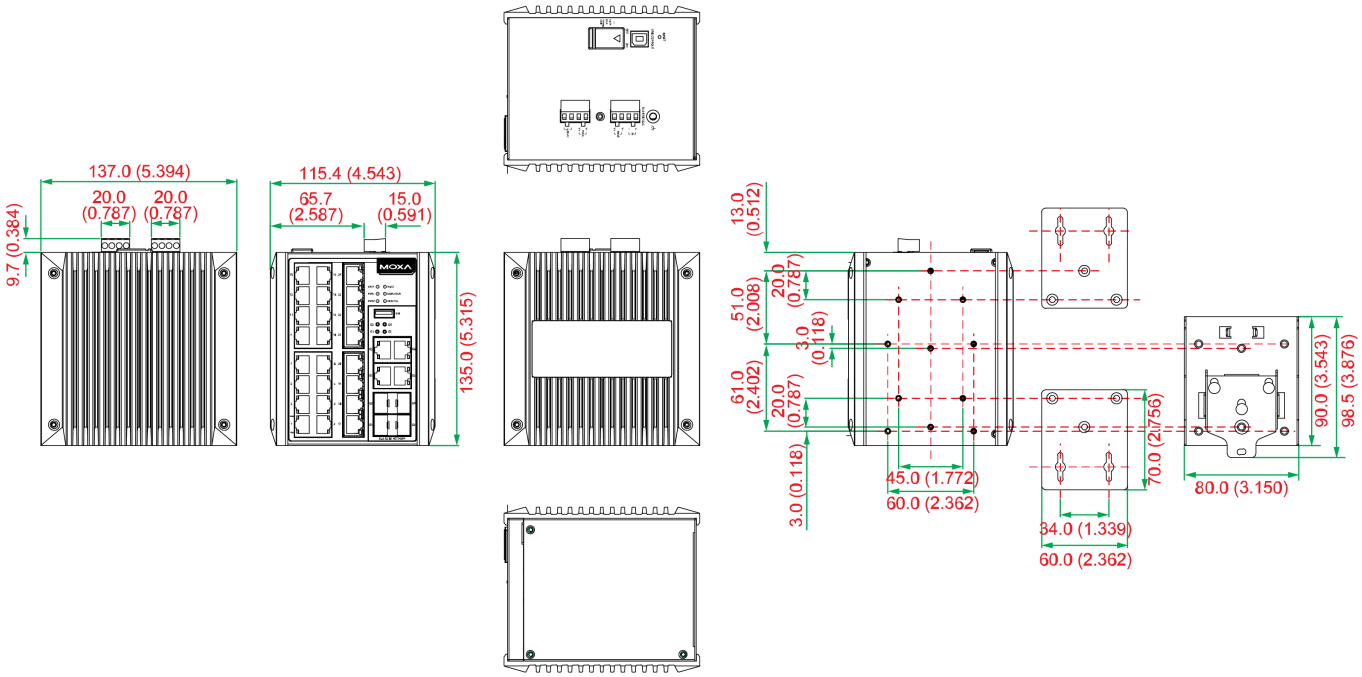
Package Contents

Device	1 x EDS-528E 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+	12/24/48/-48 VDC	110/220 VDC/VAC	Operating Temp.
EDS-528E-4GTXSFP-LV	24	4	2	–	-10 to 60°C
EDS-528E-4GTXSFP-LV-T	24	4	2	–	-40 to 75°C
EDS-528E-4GTXSFP-HV	24	4	–	1	-10 to 60°C
EDS-528E-4GTXSFP-HV-T	24	4	–	1	-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

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

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
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 1000BaseEZX port with LC connector for 110 km transmission, 0 to 60°C operating temperature
SFP-1GEZXLC-120	SFP module with 1 1000BaseEZX 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-1GLHXLC	SFP module with 1 1000BaseLHX port with LC connector for 40 km transmission, 0 to 60°C operating temperature
SFP-1GLHXLC-T	SFP module with 1 1000BaseLHX port with LC connector for 40 km transmission, -40 to 85°C operating temperature
SFP-1GLSXLC	SFP module with 1 1000BaseLSX port with LC connector for 1km/2km transmission, 0 to 60°C operating temperature
SFP-1GLSXLC-T	SFP module with 1 1000BaseLSX port with LC connector for 1km/2km transmission, -40 to 85°C operating temperature

SFP-1GLXLC	SFP module with 1 1000BaseLX port with LC connector for 10 km transmission, 0 to 60°C operating temperature
SFP-1GLXLC-T	SFP module with 1 1000BaseLX port with LC connector for 10 km transmission, -40 to 85°C operating temperature
SFP-1GSXLC	SFP module with 1 1000BaseSX port with LC connector for 300m/550m transmission, 0 to 60°C operating temperature
SFP-1GSXLC-T	SFP module with 1 1000BaseSX port with LC connector for 300m/550m 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

Software

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

Rack-Mounting Kits

RK-4U	19-inch rack-mounting kit

Wall-Mounting Kits

WK-60-01	Wall-mounting kit, 2 plates, 6 screws, 60 x 70 x 2 mm

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