EDS-516A 系列

16 埠網管型乙太網路交換器



特色與優點

- Turbo Ring 和 Turbo Chain（復原時間 < 20 毫秒 @ 250 台交換器），以及 STP/RSTP/MSTP，以實現網路備援
- 支援 TACACS+、SNMPv3、IEEE 802.1X、HTTPS 和 SSH，強化網路安全
- 透過網頁瀏覽器、CLI、Telnet / 串列主控台、Windows 工具程式和 ABC-01 輕鬆管理網路
- 支援 MXstudio，輕鬆實現可視化的工業網路管理

認證

簡介

EDS-516A 獨立 16 埠網管型乙太網路交換器搭載先進的 Turbo Ring 和 Turbo Chain 技術（復原時間 < 20 ms）、RSTP/STP，以及 MSTP，可提升工業乙太網路的可靠性和可用性。此外還提供介於 -40 至 75°C 的寬操作溫度範圍的型號，此交換器支援進階管理與安全功能，因此 EDS-516A 交換器適用於任何嚴峻工業環境。

附加特色與優點

- 命令列介面（CLI）快速設定主要網管功能
- DHCP Option 82 以不同原則指派 IP 位址
- 支援 EtherNet/IP 和 Modbus TCP 通訊協定以進行設備管理和監控
- 相容於 PROFINET 通訊協定以進行透通式數據傳輸
- 連接埠鎖定功能可依據 MAC 位址封鎖未經授權的存取
- 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
- RMON 提供主動且有效率的網路監控
- SNMPv1/v2c/v3，支援不同層級的網路管理
- 頻寬管理可預防不穩定的網路狀態出現
- 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

規格

Input/Output Interface

Alarm Contact Channels	Resistive load: 1 A @ 24 VDC
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-516A Series: 16 EDS-516A-MM-SC/MM-ST Series: 14 All models support: Auto negotiation speed Full/Half duplex mode Auto MDI/MDI-X connection
100BaseFX Ports (multi-mode SC connector)	EDS-516A-MM-SC Series: 2
100BaseFX Ports (multi-mode ST connector)	EDS-516A-MM-ST Series: 2

Optical Fiber

		100BaseFX			
		Multi-Mode		Single-Mode (40 km)	Single-Mode (80 km)
Fiber Cable Type		OM1	50/125 µm 800 MHz x km	G.652	G.652
Typical Distance		4 km	5 km	40 km	80 km
Wavelength	Typical (nm)	1300		1310	1550
	TX Range (nm)	1260 to 1360		1280 to 1340	1530 to 1570
	RX Range (nm)	1100 to 1600		1100 to 1600	1100 to 1600
Optical Power	TX Range (dBm)	-10 to -20		0 to -5	0 to -5
	RX Range (dBm)	-3 to -32		-3 to -34	-3 to -34
	Link Budget (dB)	12		29	29
	Dispersion Penalty (dB)	3		1	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 802.1X for authentication
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 802.1Q for VLAN Tagging
IEEE 802.1p for Class of Service
IEEE 802.3x for flow control
IEEE 802.3ad for Port Trunk with LACP

Ethernet Software Features

Filter

802.1Q VLAN
GMRP
GVRP
IGMP v1/v2
Port-based VLAN

Industrial Protocols

EtherNet/IP
Modbus TCP

Management

IPv4/IPv6
SNMPv1/v2c/v3
LLDP
Port Mirroring
Back Pressure Flow Control
BOOTP
DDM
DHCP Option 66/67/82
DHCP Server/Client
Flow control
RARP
RMON
SMTP
SNMP Inform
Syslog
Telnet

	TFTP
MIB	MIB-II Bridge MIB Ethernet-like MIB P-BRIDGE MIB Q-BRIDGE MIB RMON MIB Groups 1, 2, 3, 9 RSTP MIB
Redundancy Protocols	STP MSTP RSTP LACP Link Aggregation Turbo Chain Turbo Ring v1/v2
Security	HTTPS/SSL RADIUS TACACS+ Port Lock SSH Broadcast storm protection
Time Management	NTP Server/Client SNTP

Switch Properties

IGMP Groups	256
MAC Table Size	8 K
Max. No. of VLANs	64
Packet Buffer Size	2 Mbits
Priority Queues	4
VLAN ID Range	VID 1 to 4094

LED Interface

LED Indicators	PWR1, PWR2, FAULT, 10/100M (TP port), 100M (fiber port), MSTR/HEAD, CPLR/TAIL

Serial Interface

Console Port	RS-232 (TxD, RxD, GND), 10-pin RJ45 (115200, n, 8, 1)

DIP Switch Configuration

Ethernet Interface	Turbo Ring, Master, Coupler, Reserve

Power Parameters

Connector	2 removable 6-contact terminal block(s)
Input Voltage	24 VDC Redundant dual inputs
Operating Voltage	12 to 45 VDC
Input Current	EDS-516A Series: 0.35 A @ 24 VDC EDS-516A-MM-SC/MM-ST Series: 0.44 A @ 24 VDC
Overload Current Protection	Supported
Reverse Polarity Protection	Supported

Physical Characteristics

Housing	Metal
IP Rating	IP30
Dimensions	94 x 135 x 142.7 mm (3.7 x 5.31 x 5.62 in)
Weight	1586 g (3.50 lb)
Installation	DIN-rail mounting Wall mounting (with optional kit)

Environmental Limits

Operating Temperature	Standard Models: 0 to 60°C (32 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	EN 62368-1 UL 60950-1 UL 508
EMC	EN 55032/35
EMI	CISPR 32, FCC Part 15B Class A
EMS	IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m IEC 61000-4-4 EFT: Power: 1 kV; Signal: 0.5 kV IEC 61000-4-5 Surge: Power: 2 kV; Signal: 1 kV IEC 61000-4-6 CS: 10 V IEC 61000-4-8 PFMF
Hazardous Locations	ATEX Class I Division 2
Vibration	IEC 60068-2-6
Shock	IEC 60068-2-27
Freefall	IEC 60068-2-31
Maritime	DNV

MTBF

Time	EDS-516A models: 250,219 hrs EDS-516A-MM-ST/SC models: 247,676 hrs
Standards	Telcordia (Bellcore), GB

Warranty

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

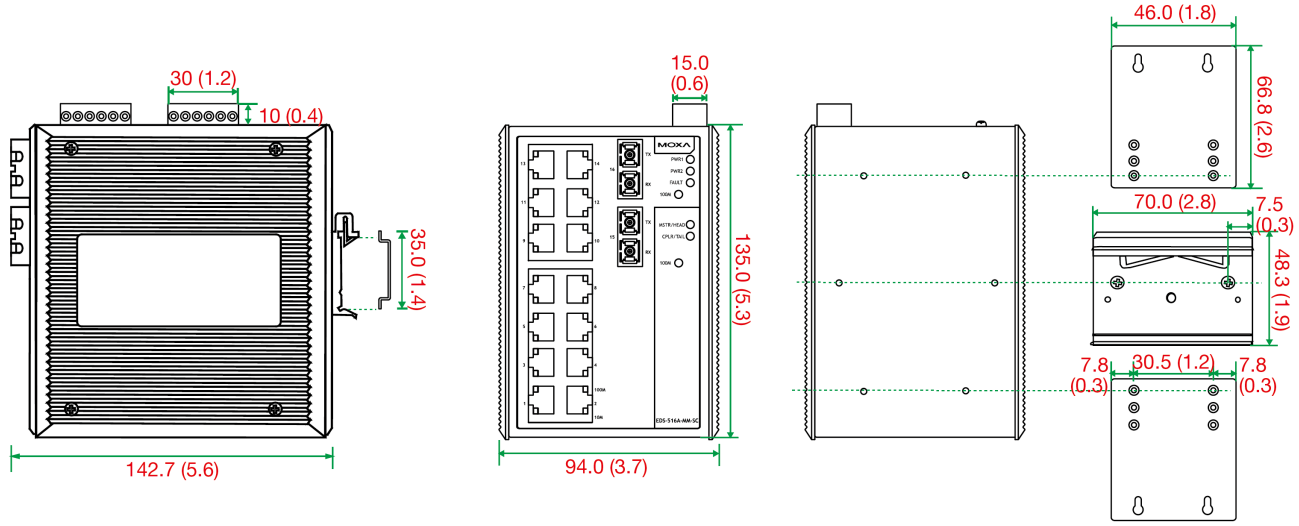
Package Contents

Device	1 x EDS-516A Series switch
Cable	1 x DB9 female to RJ45 10-pin

Installation Kit	4 x cap, plastic, for RJ45 port 2 x cap, plastic, for SC fiber port (-SC models) 2 x cap, plastic, for ST fiber port (-ST models)
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

尺寸

單位：公釐（英吋）



Side View | Front View | Rear View | DIN-Rail/ Panel-Mounting Kit

訂購資訊

Model Name	10/100BaseT(X) Ports RJ45 Connector	100BaseFX Ports Multi-Mode, SC Connector	100BaseFX Ports Multi-Mode, ST Connector	Operating Temp.
EDS-516A	16	–	–	0 to 60°C
EDS-516A-T	16	–	–	-40 to 75°C
EDS-516A-MM-SC	14	2	–	0 to 60°C
EDS-516A-MM-SC-T	14	2	–	-40 to 75°C
EDS-516A-MM-ST	14	–	2	0 to 60°C
EDS-516A-MM-ST-T	14	–	2	-40 to 75°C

配件（選購）

Storage Kits

ABC-01	Configuration backup and restoration tool for managed Ethernet switches and AWK Series wireless APs/ bridges/clients, 0 to 60°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)

Wall-Mounting Kits

WK-46	Wall-mounting kit, 2 plates, 8 screws, 46.5 x 66.8 x 1 mm

Rack-Mounting Kits

RK-4U	19-inch rack-mounting kit

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