EDS-2016-ML 系列

16 埠非網管型乙太網路交換器

特色與優點

- 10/100BaseT(X)（RJ45 連接器）、100BaseFX（多 / 單模式、SC 或 ST 連接器）
- 支援 QoS 在高負荷流量中處理重要資料
- 發生電源故障和通訊埠連結中斷時可透過繼電器輸出警告
- IP30 等級金屬外殼
- 雙備援 12/24/48 VDC 電源輸入
- -40 至 75°C 操作溫度範圍（-T 型號）

認證

簡介

EDS-2016-ML 系列工業級乙太網路交換器具有多達16 個10/100M 網路埠及兩組光纖連接埠，具有SC/ST 連接頭選項，非常適合需要彈性工業級乙太網路連線的應用。此外，為了針對不同產業的應用提供更多的彈性，EDS-2016-ML 系列允許使用者透過外部面板DIP 開啟或停用服務品質功能（QoS），廣播風暴防護和連接埠中斷警報功能。

除了其小巧的尺寸外，EDS-2016-ML 系列還具有12/24/48 VDC 雙備援電源輸入、DIN Rail 軌軌安裝、高等級EMI/EMC 防護能力，-10 至60°C 的操作溫度範圍，還有-40 至75°C 的寬溫度型號可供選擇。EDS-2016-ML 系列也通過100% 的高溫測試，確保現場的穩定運作。

規格

Ethernet Interface

10/100BaseT(X) Ports (RJ45 connector)	EDS-2016-ML(-T): 16 EDS-2016-ML-MM-SC(-T): 14 EDS-2016-ML-MM-ST(-T): 14 EDS-2016-ML-SS-SC(-T): 14 Auto negotiation speed Full/Half duplex mode Auto MDI/MDI-X connection
100BaseFX Ports (multi-mode SC connector)	EDS-2016-ML-MM-SC(-T): 2
100BaseFX Ports (multi-mode ST connector)	EDS-2016-ML-MM-ST(-T): 2
100BaseFX Ports (single-mode SC connector)	EDS-2016-ML-SS-SC(-T): 2

Standards	IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseT(X) IEEE 802.3x for flow control IEEE 802.1p for Class of Service

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).

DIP Switch Configuration

Ethernet Interface	Quality of Service (QoS) Broadcast storm protection Port break alarm

Input/Output Interface

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

Switch Properties

MAC Table Size	8 K
Packet Buffer Size	2 Mbits
Processing Type	Store and Forward

Power Parameters

Connection	1 removable 6-contact terminal block(s)
Input Current	EDS-2016-ML: 0.088 A @ 24 VDC EDS-2016-ML-MM-SC: 0.149 A @ 24 VDC EDS-2016-ML-MM-ST: 0.152 A @ 24 VDC EDS-2016-ML-SS-SC: 0.163 A @ 24 VDC
Input Voltage	12/24/48 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	Non-fiber models: 36 x 135 x 95 mm (1.41 x 5.31 x 3.74 in) Fiber models: 58 x 135 x 95 mm (2.28 x 5.31 x 3.74 in)
Weight	Non-fiber models: 486 g (1.07 lb) Fiber models: 648 g (1.43 lb)
Installation	DIN-rail mounting Wall mounting (with optional kit)

Environmental Limits

Operating Temperature	Standard temp. 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(LVD)
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: 6 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 MHz: 20 V/m IEC 61000-4-4 EFT: Power: 2 kV; Signal: 2 kV 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	Class I Division 2 ATEX IECEx
Railway	EN 50121-4
Traffic Control	NEMA TS2
Vibration	IEC 60068-2-6
Shock	IEC 60068-2-27
Freefall	IEC 60068-2-32
Maritime	DNV LR ABS NK

MTBF

Time	Non-fiber models: 2,523,953 hrs Fiber models: 2,070,826 hrs
Standards	Telcordia (Bellcore), GB

Warranty

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

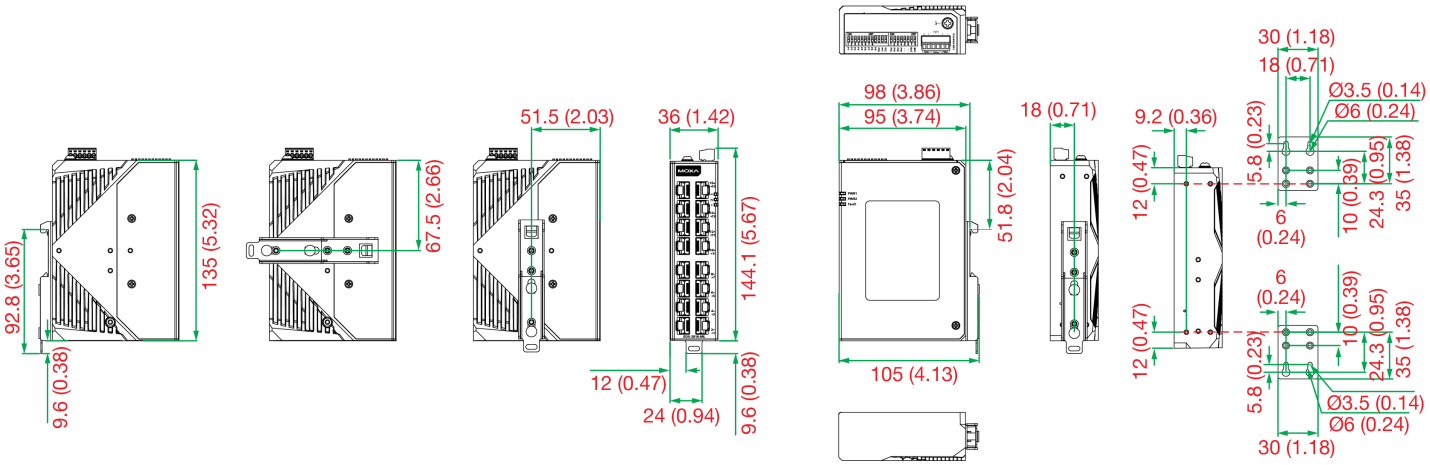
Package Contents

Device	1 x EDS-2016-ML Series switch
Installation Kit	4 x cap, plastic, for RJ45 port
Documentation	1 x quick installation guide 1 x warranty card

尺寸

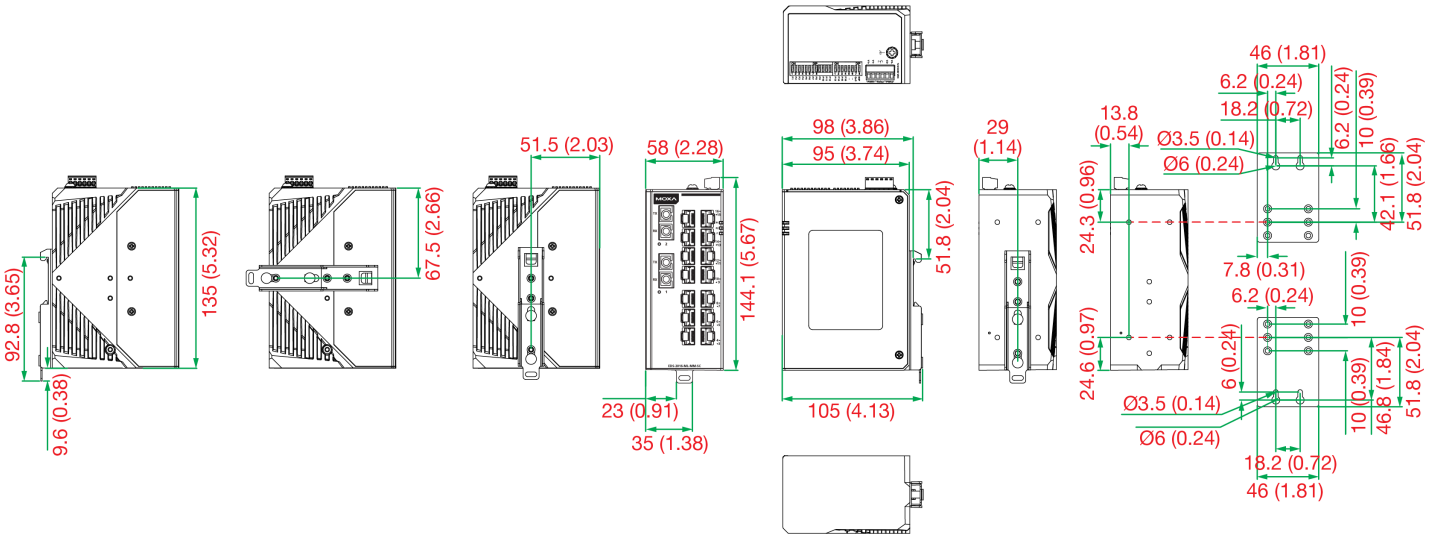
EDS-2016-ML 銅線系列

單位：公釐（英吋）



EDS-2016-ML 光纖系列

單位：公釐（英吋）



訂購資訊

Model Name	10/100BaseT(X) Ports, RJ45 Connector	100BaseFX Ports Multi-mode, SC Connector	100BaseFX Ports Multi-mode, ST Connector	100BaseFX Ports Single-mode, SC Connector	Operating Temp.
EDS-2016-ML	16	–	–	–	-10 to 60°C
EDS-2016-ML-T	16	–	–	–	-40 to 75°C
EDS-2016-ML-MM-SC	14	2	–	–	-10 to 60°C
EDS-2016-ML-MM-SC-T	14	2	–	–	-40 to 75°C
EDS-2016-ML-MM-ST	14	–	2	–	-10 to 60°C
EDS-2016-ML-MM-ST-T	14	–	2	–	-40 to 75°C
EDS-2016-ML-SS-SC	14	–	–	2	-10 to 60°C
EDS-2016-ML-SS-SC-T	14	–	–	2	-40 to 75°C

配件（選購）

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

Wall-Mounting Kits

WK-30-02	Wall-mounting kit, 2 plates, 4 screws, 30 x 66.8 x 2 mm Applicable Models: EDS-2016-ML EDS-2016-ML-T
WK-46-01	Wall-mounting kit, 2 plates, 8 screws, 46 x 66.8 x 2 mm Applicable Models: EDS-2016-ML-MM-SC EDS-2016-ML-MM-SC-T EDS-2016-ML-MM-ST EDS-2016-ML-MM-ST-T EDS-2016-ML-SS-SC EDS-2016-ML-SS-SC-T

Rack-Mounting Kits

RK-4U	19-inch rack-mounting kit

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