

# EDS-4009 系列

## 9 埠網管型乙太網路交換器



### 特色與優點

- 根據 IEC 62443-4-1 開發並符合 IEC 62443-4-2 工業網路安全標準
- Turbo Ring 與 Turbo Chain (對於 250 台交換器斷線復連時間小於 20 毫秒)<sup>1</sup>，以及透過 RSTP/STP 協議支援網路備援
- 廣泛的電源輸入選項，可提供彈性部署
- 小巧彈性的外殼設計，適合狹窄的空間
- 支援 MXstudio，輕鬆實現可視化的工業網路管理

### 認證



### 簡介

EDS-4009 系列是一系列 9 埠網管型快速乙太網路交換器，可選擇 3 個 100M ST/SC 光纖連接埠。

備援乙太網路技術如 Turbo Ring、Turbo Chain 和 RSTP/STP，將可增加系統的可靠性，並且改善網路骨幹的可用性。EDS-4009 系列專為應用需求所設計，如視訊與流程監控、ITS 和 DCS 系統等，皆可從可擴充的網路骨幹中獲益。

EDS-4009 系列符合 IEC 62443-4-2 和 IEC 62443-4-1 工業網路安全認證，涵蓋產品安全和安全開發生命週期要求，有助於我們的客戶滿足安全工業網路設計的合規要求。

### 規格

#### Ethernet Interface

10/100BaseT(X) Ports (RJ45 connector)	6 Auto negotiation speed Full/Half duplex mode Auto MDI/MDI-X connection
100BaseFX Ports (multi-mode SC connector)	EDS-4009-3MSC-LV/-HV/-T models: 3
100BaseFX Ports (multi-mode ST connector)	EDS-4009-3MST-LV/-HV/-T models: 3
100BaseFX Ports (single-mode SC connector)	EDS-4009-3SSC-LV/-HV/-T models: 3
Standards	IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseT(X) and 100BaseFX IEEE 802.3x for flow control IEEE 802.3ad for Port Trunk with LACP IEEE 802.1Q for VLAN Tagging IEEE 802.1D-2004 for Spanning Tree Protocol IEEE 802.1w for Rapid Spanning Tree Protocol IEEE 802.1p for Class of Service IEEE 802.1X for authentication

1. 如果連接埠鏈路速度是 1 Gigabit 或更高，復原時間小於 50 毫秒

## Ethernet Software Features

Filter	GMRP, GVRP, GARP, 802.1Q VLAN, IGMP Snooping v1/v2/v3, IGMP Querier
Management	IPv4/IPv6, Flow control, Back Pressure Flow Control, DHCP Server/Client, ARP, RARP, LLDP, Port Mirror, Linkup Delay, SMTP, SNMP Trap, SNMP Inform, SNMPv1/v2c/v3, RMON, TFTP, SFTP, HTTP, HTTPS, Telnet, Syslog, Private MIB
MIB	P-BRIDGE MIB, Q-BRIDGE MIB, IEEE8021-SPANNING-TREE-MIB, IEEE8021-PAE-MIB, IEEE8023-LAG-MIB, LLDP-EXT-DOT1-MIB, LLDP-EXT-DOT3-MIB, SNMPv2-MIB, RMON MIB Groups 1, 2, 3, 9
Redundancy Protocols	STP, RSTP, Turbo Ring v2, Turbo Chain, Ring Coupling, Dual-Homing, Link Aggregation
Security	Broadcast storm protection, Rate Limit, Trust access control, Static Port Lock, MAC Sticky, HTTPS/SSL, SSH, RADIUS, TACACS+, Login and Password Policy
Time Management	SNTP, NTP Server/Client, NTP Authentication
Protocols	IPv4/IPv6, TCP/IP, UDP, ICMP, ARP, RARP, TFTP, DNS, NTP Client, DHCP Server, DHCP Client, 802.1X, QoS, HTTPS, HTTP, Telnet, SMTP, SNMPv1/v2c/v3, RMON, Syslog

## Switch Properties

MAC Table Size	16 K
Jumbo Frame Size	9.216 KB
Max. No. of VLANs	256
VLAN ID Range	VID 1 to 4094
IGMP Groups	512
Priority Queues	4
Packet Buffer Size	1 MB

## LED Interface

LED Indicators	PWR1, PWR2, STATE, FAULT, MSTR/HEAD, CPLR/TAIL, SYNC
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## Serial Interface

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

USB Connector	USB Type A (Reserved)
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## Input/Output Interface

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

## DIP Switch Configuration

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

Connection	2 removable 4-contact terminal block(s)
Pre-installed Power Module	-LV/-LV-T models: PWR-100-LV

	-HV/-HV-T models: PWR-105-HV-I
Note	<p>The EDS-4009 Series supports modular power supplies. The model names and power parameters are determined by the installed power module.</p> <p>For example:  EDS-4009-T + PWR-100-LV = EDS-4009-LV-T  EDS-4009-T + PWR-105-HV-I = EDS-4009-HV-T</p> <p>If you install a different power module, refer to the specifications of the corresponding model. For example, if you replace the power module of the EDS-4009-LV-T with the PWR-105-HV-I, refer to the specifications of the EDS-4009-HV-T.</p>
Input Voltage	-LV/-LV-T models: 12/24/48 VDC, Redundant dual inputs -HV/-HV-T models: 110/220 VDC/VAC, Single input
Operating Voltage	-LV/-LV-T models: 9.6 to 60 VDC -HV/-HV-T models: 88 to 300 VDC, 85 to 264 VAC
Input Current	-LV/-LV-T models: 12-48 VDC, 1.50-0.40 A or 24 VDC, 0.70 A -HV/-HV-T models: 110-220 VAC, 50-60 Hz, 0.30-0.20 A or 110-220 VDC, 0.30-0.20 A
Power Consumption (Max.)	EDS-4009-3MSC-LV(-T) models: 9.51 W EDS-4009-3MSC-HV(-T) models: 12.14 W EDS-4009-3MST-LV(-T) models: 9.51 W EDS-4009-3MST-HV(-T) models: 12.17 W EDS-4009-3SSC-LV(-T) models: 9.51 W EDS-4009-3SSC-HV(-T) models: 12.34 W
Overload Current Protection	Supported
Reverse Polarity Protection	Supported

### Physical Characteristics

IP Rating	IP40
Dimensions	EDS-4009-3MSC(-T)/EDS-4009-3SSC(-T) models: 55 x 140 x 120 mm (2.17 x 5.51 x 4.72 in) EDS-4009-3MST(-T) models: 55 x 140 x 132 mm (2.17 x 5.51 x 5.20 in)
Weight	EDS-4009-3MSC(-T) models: 821.5 g (1.81 lb) EDS-4009-3MST(-T) models: 920 g (2.03 lb) EDS-4009-3SSC(-T) models: 932 g (2.05 lb)
Installation	DIN-rail mounting, Wall mounting (with optional kit)
Housing	Metal

### 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

Industrial Cybersecurity	IEC 62443-4-1 IEC 62443-4-2
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: 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
Vibration	IEC 60068-2-6
Shock	IEC 60068-2-27
Freefall	IEC 60068-2-32
Railway	EN 50121-4
Traffic Control	NEMA TS2

## MTBF

Time	EDS-4009-3MSC-LV/-LV-T models: 972,841 hrs EDS-4009-3MSC-HV/-HV-T models: 482,263 hrs EDS-4009-3MST-LV/-LV-T models: 972,841 hrs EDS-4009-3MST-HV/-HV-T models: 482,263 hrs EDS-4009-3SSC-LV/-LV-T models: 972,841 hrs EDS-4009-3SSC-HV/-HV-T models: 482,263 hrs
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## Warranty

Warranty Period	5 years
Details	See <a href="http://www.moxa.com/tw/warranty">www.moxa.com/tw/warranty</a>

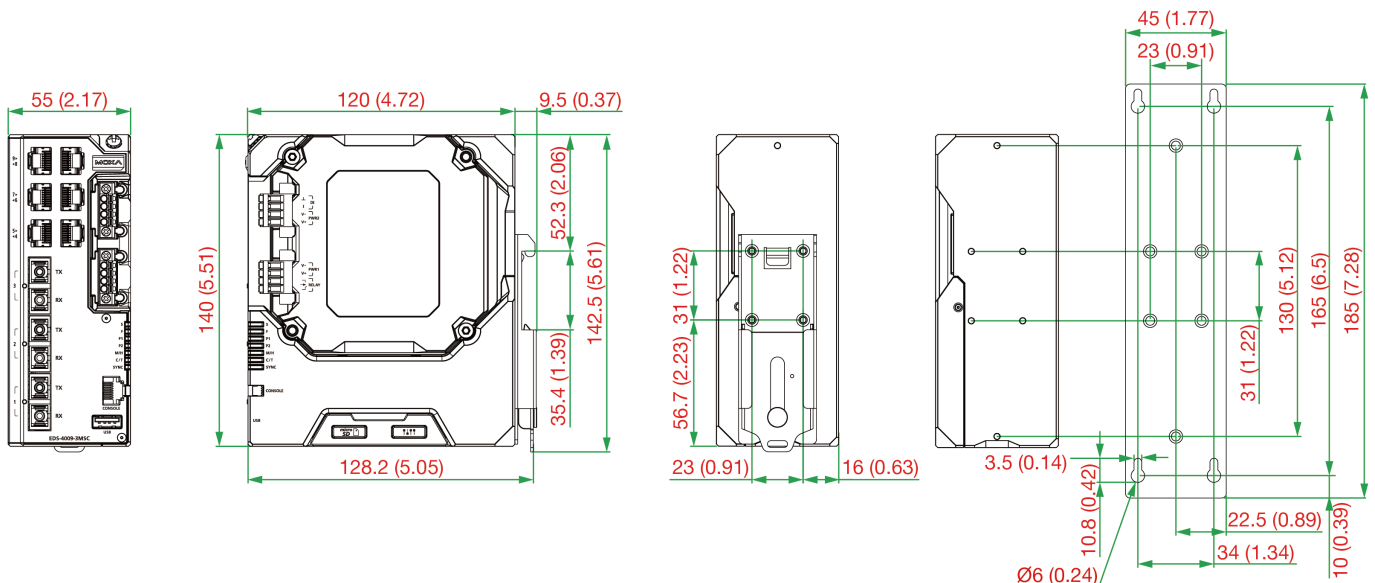
## Package Contents

Device	1 x EDS-4009 Series switch
Documentation	1 x quick installation guide 1 x product notice, Simplified Chinese 1 x product certificates of quality inspection, Simplified Chinese 1 x warranty card

## 尺寸

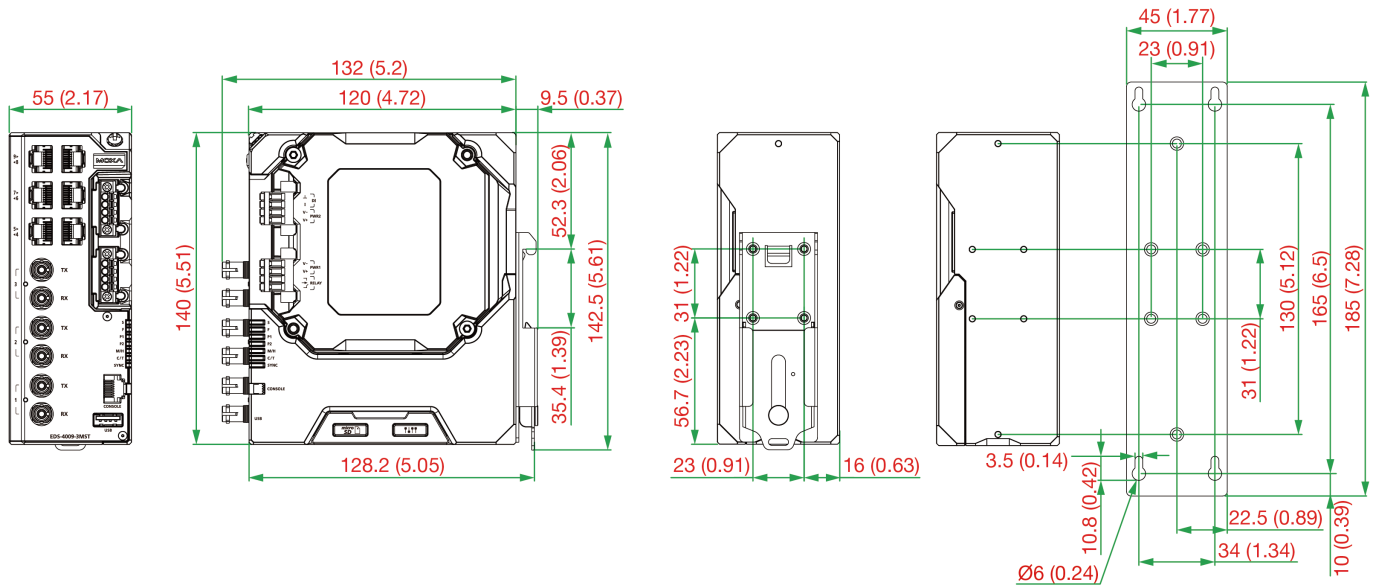
### EDS-4009-3MSC(-T) 、EDS-4009-3SSC(-T) 型號

單位：公釐 (英吋)



## EDS-4009-3MST(-T) 型號

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 Voltage	Pre-installed Power Module	Operating Temp.
EDS-4009-3MSC-LV	6	3	-	-	9.6 to 60 VDC	PWR-100-LV	-10 to 60°C
EDS-4009-3MSC-LV-T	6	3	-	-	9.6 to 60 VDC	PWR-100-LV	-40 to 75°C
EDS-4009-3MSC-HV	6	3	-	-	88 to 300 VDC, 85 to 264 VAC	PWR-105-HV-I	-10 to 60°C
EDS-4009-3MSC-HV-T	6	3	-	-	88 to 300 VDC, 85 to 264 VAC	PWR-105-HV-I	-40 to 75°C
EDS-4009-3MST-LV	6	-	3	-	9.6 to 60 VDC	PWR-100-LV	-10 to 60°C
EDS-4009-3MST-LV-T	6	-	3	-	9.6 to 60 VDC	PWR-100-LV	-40 to 75°C
EDS-4009-3MST-HV	6	-	3	-	88 to 300 VDC, 85 to 264 VAC	PWR-105-HV-I	-10 to 60°C
EDS-4009-3MST-HV-T	6	-	3	-	88 to 300 VDC, 85 to 264 VAC	PWR-105-HV-I	-40 to 75°C
EDS-4009-3SSC-LV	6	-	-	3	9.6 to 60 VDC	PWR-100-LV	-10 to 60°C
EDS-4009-3SSC-LV-T	6	-	-	3	9.6 to 60 VDC	PWR-100-LV	-40 to 75°C
EDS-4009-3SSC-HV	6	-	-	3	88 to 300 VDC, 85 to 264 VAC	PWR-105-HV-I	-10 to 60°C
EDS-4009-3SSC-HV-T	6	-	-	3	88 to 300 VDC, 85 to 264 VAC	PWR-105-HV-I	-40 to 75°C

## 配件 (選購)

### 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

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