

SDS-3016 系列

16 埠 (選用 2 個 Giga 上行鏈路埠) 智慧型乙太網路交換器



特色與優點

- 精巧且具彈性的外殼設計，適合安裝於空間受限的環境
- 提供基於網頁的 GUI，方便進行設備配置與管理
- 多語言 Web GUI：英文、繁體中文、簡體中文、日文、德文與法文
- 支援 RSTP/STP 與 MRP 網路冗餘機制以確保高網路可用性
- 支援 EtherNet/IP、PROFINET 與 Modbus TCP 工業協定，便於整合至自動化 HMI/SCADA 系統進行監控
- 旋轉式 DIP 開關可在不使用網頁瀏覽器的情況下進行基於設定檔的設定
- 支援 MXstudio，輕鬆實現可視化的工業網路管理

認證



簡介

SDS-3016 智慧型乙太網路交換器是 IA 工程師與自動化設備製造商的理想產品，可使其網路符合工業 4.0 的願景。透過為機器與控制機櫃注入活力，此智慧交換器以簡易配置及安裝的特性，簡化日常作業。此外，該產品在整個生命週期內皆可進行監控，且易於維護。

SDS-3016 交換器內建最常用的自動化協定，包括 EtherNet/IP、PROFINET 與 Modbus TCP，使其可從自動化 HMI 進行控制與可視化，進而提升運作效能與彈性。它還支援多項實用管理功能，包括 IEEE 802.1Q VLAN、埠鏡像、SNMP、繼電器警告以及多語言 Web GUI。

附加特色與優點

- 透過 IP 埠綁定，確保關鍵設備在更換時無需重新指派 IP 位址即可快速替換。
- IEEE 802.1Q VLAN 用來簡化網路規劃
- 支援 ABC-02-USB (自動備份配置器) 以進行快速系統配置備份/還原與韌體升級
- 發生例外狀況時透過繼電器輸出自動發出警告
- 未使用埠鎖定、SNMPv3 與 HTTPS 可強化網路安全性
- 連接埠鏡像功能可用於線上除錯與監控
- 本地日誌以及可匯出庫存檔案的功能，讓資產管理更加便利

規格

Ethernet Interface

10/100BaseT(X) Ports (RJ45 connector)	SDS-3016(-T) models: 16 SDS-3016-2GTX(-T) models: 14 SDS-3016-2GSFP(-T) models: 14 Auto negotiation speed Full/Half duplex mode Auto MDI/MDI-X connection
10/100/1000BaseT(X) Ports (RJ45 connector)	SDS-3016-2GTX(-T) models: 2
100/1000BaseSFP Slots	SDS-3016-2GSFP(-T) models: 2
Standards	IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseT(X) IEEE 802.3ab for 1000BaseT(X) IEEE 802.3x for flow control IEEE 802.1D-2004 for Spanning Tree Protocol IEEE 802.1w for Rapid Spanning Tree Protocol IEEE 802.1Q for VLAN Tagging IEEE 802.1p for Class of Service

Ethernet Software Features

Industrial Protocols	EtherNet/IP Modbus TCP PROFINET IO Device MECHATROLINK-4
Management	Back Pressure Flow Control DHCP Client Fiber check Flow control IPv4/IPv6 LLDP Port Mirroring RMON SNMP Inform SNMPv1/v2c/v3 Syslog
MIB	RFC1213 Ethernet-like MIB IF MIB LLDP MIB Bridge MIB Q-BRIDGE MIB
Redundancy Protocols	RSTP STP MRP
Security	Broadcast storm protection HTTPS/SSL SNMPv3 Port Lock Trust access control
Time Management	NTP Server/Client SNTP
Filter	802.1Q VLAN

Rotary Switch Configuration

Industrial Profile	Indicator	Mode
	0	No function enabled via DIP switch (Default)
	1	PROFINET profile enabled
	2	PROFINET profile and DHCP client enabled
	3	EtherNet/IP profile enabled
	4	EtherNet/IP profile and DHCP client enabled
	5	Modbus TCP profile enabled
	6	Modbus TCP profile and DHCP client enabled
	7	MECHATROLINK-4 profile enabled
	8-9	Reserved (currently performs the same behavior as indicator 0)

Switch Properties

Jumbo Frame Size	9.6 KB
MAC Table Size	8 K
Max. No. of VLANs	8

VLAN ID Range	VID 1 to 4094
Packet Buffer Size	3 Mbits
LED Interface	
LED Indicators	PWR1, PWR2, STATE, FAULT, 10/100M, 1000M (TP Port), 1000M (TP port), 100/1000M (SFP port)
USB Interface	
Storage Port	USB Type A (for ABC-02 only)
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
Power Parameters	
Connector	2 removable 4-contact terminal block(s)
Input Voltage	12-48 VDC Redundant dual inputs
Operating Voltage	9.6 to 60 VDC
Input Current	SDS-3016(-T) models: 1.08 A max. 12-48 VDC SDS-3016-2GTX(-T) models: 1.08 A max. 12-48 VDC SDS-3016-2GSFP(-T) models: 1.29 A max. 12-48 VDC
Power Consumption (Max.)	SDS-3016(-T) models: 7.34 W SDS-3016-2GTX(-T) models: 7.76 W SDS-3016-2GSFP(-T) models: 9.40 W
Overload Current Protection	Supported
Reverse Polarity Protection	Supported
Physical Characteristics	
Housing	Metal
IP Rating	IP40
Dimensions	36 x 135 x 111 mm (1.42 x 5.32 x 4.37 in)
Weight	SDS-3016(-T) models: 772 g (1.70 lbs) SDS-3016-2GTX(-T) models: 772 g (1.70 lbs) SDS-3016-2GSFP(-T) models: 796 g (1.75 lbs)
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

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 800 MHz: 10 V/m; 800 MHz to 1 GHz: 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 (1.2/50 μ s), 1 kV (10/700 μ s) IEC 61000-4-6 CS: 10 V IEC 61000-4-8 PFMF
Safety	EN IEC 62368-1 UL 61010-2-201
Shock	IEC 60068-2-27
Freefall	IEC 60068-2-32
Vibration	IEC 60068-2-6

MTBF

Time	SDS-3016(-T) models: 2,982,863 hrs SDS-3016-2GTX(-T) models: 2,982,863 hrs SDS-3016-2GSFP(-T) models: 2,844,904 hrs
Standards	Telcordia (Bellcore), GB

Warranty

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

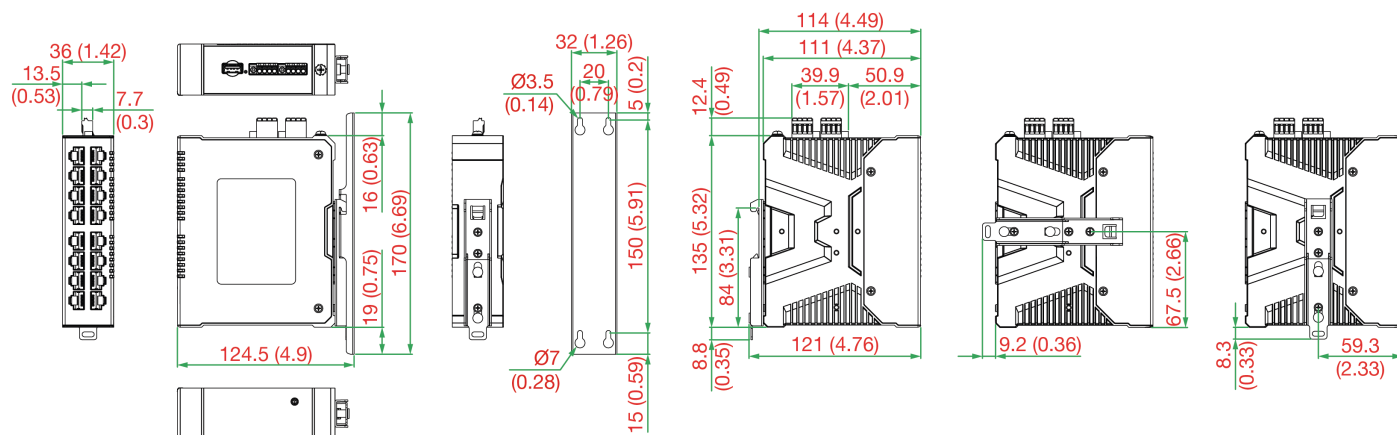
Package Contents

Device	1 x SDS-3016 Series switch
Documentation	1 x product certificates of quality inspection, Simplified Chinese 1 x product notice, Simplified Chinese 1 x quick installation guide 1 x warranty card

尺寸

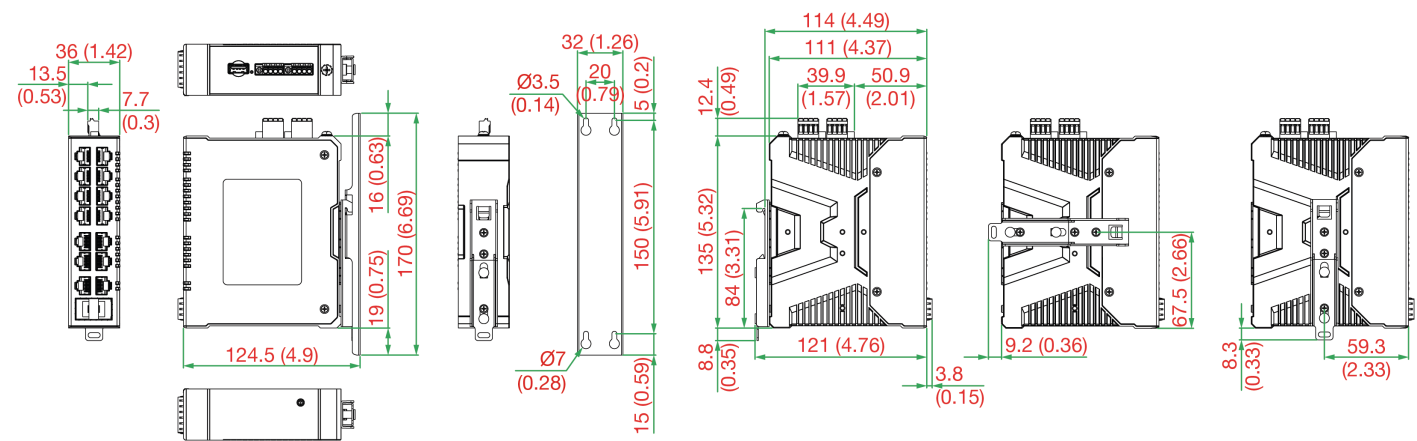
SDS-3016 與 SDS-3016-2GTX 型號

單位：公釐（英吋）



SDS-3016-2GSFP 型號

單位：公釐（英吋）



訂購資訊

Model Name	10/100BaseT(X) Ports, RJ45 Connector	10/100/1000BaseT(X) Ports, RJ45 Connector	100/1000BaseSFP Ports	Operating Voltage	Operating Temp.
SDS-3016	16	-	-	9.6 to 60 VDC	-10 to 60°C
SDS-3016-T	16	-	-	9.6 to 60 VDC	-40 to 75°C
SDS-3016-2GTX	14	2	-	9.6 to 60 VDC	-10 to 60°C
SDS-3016-2GTX-T	14	2	-	9.6 to 60 VDC	-40 to 75°C
SDS-3016-2GSFP	14	-	2	9.6 to 60 VDC	-10 to 60°C
SDS-3016-2GSFP-T	14	-	2	9.6 to 60 VDC	-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-1GEZXC	SFP module with 1 1000BaseEZ port with LC connector for 110 km transmission, 0 to 60°C operating temperature
SFP-1GEZXC-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-1GLHXC	SFP module with 1 1000BaseLHX port with LC connector for 40 km transmission, 0 to 60°C operating temperature
SFP-1GLSXC	SFP module with 1 1000BaseLS port with LC connector for 1km/2km transmission, 0 to 60°C operating temperature
SFP-1GLXC	SFP module with 1 1000BaseLX port with LC connector for 10 km transmission, 0 to 60°C operating temperature
SFP-1GSXC	SFP module with 1 1000BaseSX port with LC connector for 300m/550m transmission, 0 to 60°C operating temperature
SFP-1GZXC	SFP module with 1 1000BaseZX port with LC connector for 80 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-1GLHLC-T	SFP module with 1 1000BaseLHX port with LC connector for 40 km transmission, -40 to 85°C operating temperature
SFP-1GLSXC-T	SFP module with 1 1000BaseLSX port with LC connector for 1km/2km transmission, -40 to 85°C operating temperature
SFP-1GLXC-T	SFP module with 1 1000BaseLX port with LC connector for 10 km transmission, -40 to 85°C operating temperature
SFP-1GSXC-T	SFP module with 1 1000BaseSX port with LC connector for 300m/550m transmission, -40 to 85°C operating temperature
SFP-1GZXC-T	SFP module with 1 1000BaseZX port with LC connector for 80 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-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-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-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-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-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-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-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-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-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-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-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-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-1GTXRJ45-T	SFP module with 1 1000BaseT port with RJ45 connector for 100 m transmission, -40 to 75°C operating temperature

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

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