

SDS-3016 系列

工業級 14+2G 埠 Gigabit 智慧型乙太網路交換器



特色與優點

- 輕巧彈性的外殼設計，適合狹小的空間
- 網頁式 GUI，便於裝置配置和管理
- 使用統計資料的連接埠診斷，可偵測和預防問題
- 多語言網頁式 GUI：英文、繁體中文、簡體中文、日文、德文和法文
- 支援 RSTP/STP，可實現網路備援
- 支援基於 IEC 62439-2 的 MRP 備援，確保網路高可用性
- 支援 EtherNet/IP、PROFINET 和 Modbus TCP 工業通訊協定，因此在自動化 HMI/SCADA 系統中輕鬆整合和監控
- IP 連接埠綁定，確保不需要重新指派 IP 位址即可快速更換關鍵裝置
- 旋轉 DIP 開關可以在不使用網頁瀏覽器的情況下執行以設定檔為基礎的設定
- 符合 IEC 62443 的資安防護功能

認證



簡介

SDS-3016 智慧型乙太網路交換器是 IA 工程師和自動化機器製造商的理想之選，能夠幫他們搭建符合工業 4.0 願景的網路。智慧型交換器可使機器和控制櫃煥發新的生機，由於配置和安裝簡便，可簡化每日的例行工作。此外，在產品的整個生命週期均可進行監控，而且維護相當簡便。

最常用的自動化通訊協定（包括 EtherNet/IP、PROFINET 和 Modbus TCP）內建於 SDS-3016 交換器中，可從自動化 HMI 控制和查看交換器，提升操作效能和彈性。另外，也支援多種實用的管理功能，包括 IEEE 802.1Q VLAN、連接埠鏡像、SNMP、由繼電器發出警告和多語言網頁式 GUI。

附加特色與優點

- 支援 IEEE 802.1D-2004 和 IEEE 802.1w STP/RSTP，可實現快速網路備援
- IEEE 802.1Q VLAN，用來簡化網路規劃
- 支援 ABC-02-USB 自動備份配置器，可進行快速事件日誌和配置備份。也可啟用快速裝置切換和韌體升級
- 發生例外狀況時透過繼電器輸出自動發出警告
- 未使用的連接埠鎖定、SNMPv3 和 HTTPS，可提高網路安全
- 用於自訂管理和/或使用者的角色型帳戶管理
- 本機日誌和匯出存貨檔案的功能可簡化存貨管理

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

Ethernet Interface

10/100BaseT(X) Ports (RJ45 connector)	14 Auto negotiation speed Full/Half duplex mode Auto MDI/MDI-X connection
10/100/1000BaseT(X) Ports (RJ45 connector)	2 (SDS-3016-2GTX Series) Auto negotiation speed Full/Half duplex mode Auto MDI/MDI-X connection
100/1000BaseSFP Ports	2 (SDS-3016-2GSFP Series)
Standards	IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseT(X) IEEE 802.3ab for 1000BaseT(X) IEEE 802.3z for 1000BaseX 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
Management	Back Pressure Flow Control DHCP Client Flow control IPv4/IPv6 LLDP Port Mirror 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
Time Management	NTP Server/Client SNTP
Filter	802.1Q VLAN

Rotary Switch Configuration

Industrial Profile	Indicator	Mode
	0	Modbus TCP profile (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
	Others	Reserved (has the same behavior as Indicator 0)

Switch Properties

MAC Table Size	8 K
Max. No. of VLANs	8
VLAN ID Range	VID 1 to 4094
Packet Buffer Size	3 Mbits

USB Interface

Storage Port	USB Type A
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LED Interface

LED Indicators	PWR1, PWR2, STATE, FAULT, 10/100M, 1000M (TP Port)
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Power Parameters

Connection	2 removable 4-contact terminal block(s)
Input Voltage	12/24/48/-48 VDC Redundant dual inputs
Operating Voltage	9.6 to 60 VDC
Input Current	SDS-3016-2GTX series: 12-48 VDC, 0.858 A (max.) SDS-3016-2GSFP series: 12-48 VDC, 0.99 A (max.)
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	590 g (1.3 lb)
Installation	DIN-rail mounting

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: 4 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: 1 kV IEC 61000-4-5 Surge: Power: 2 kV; Signal: 1 kV IEC 61000-4-6 CS: 10 V IEC 61000-4-8 PFMF: 30 A/m
Safety	EN 62368-1 UL 61010-2-201
Shock	IEC 60068-2-27
Freefall	IEC 60068-2-32
Vibration	IEC 60068-2-6

MTBF

Time	1,109,179 hrs
Standards	Telcordia (Bellcore), GB

Warranty

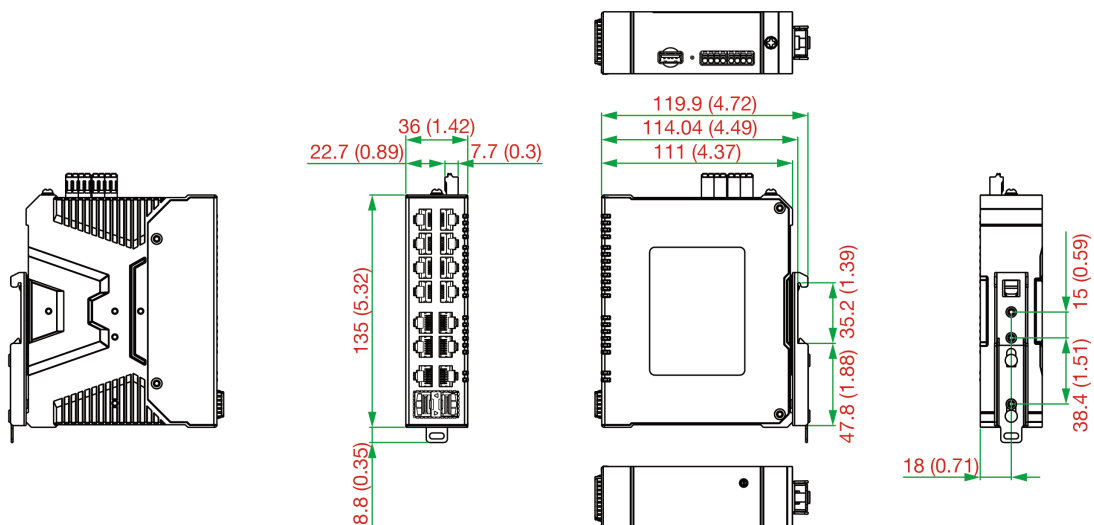
Warranty Period	5 years
Details	See www.moxa.com/tw/warranty

Package Contents

Device	1 x SDS-3016 Series switch
Installation Kit	4 x cap, plastic, for RJ45 port
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

單位：公釐（英吋）



訂購資訊

Model Name	Layer	Total No. of Ports	10/100BaseT(X) Ports, RJ45 Connector	10/100/ 1000BaseT(X) Ports, RJ45 Connector	100/1000BaseSFP Ports	Operating Temp.
SDS-3016-2GTX	2	16	14	2	–	-10 to 60°C
SDS-3016-2GTX-T	2	16	14	2	–	-40 to 75°C
SDS-3016-2GSFP	2	16	14	–	2	-10 to 60°C
SDS-3016-2GSFP-T	2	16	14	–	2	-40 to 75°C

配件 (選購)

SFP Modules

SFP-1FEMLC-T	SFP module with 1 100Base multi-mode, LC connector for 2/4 km transmission, -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-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 1000BaseEZ port with LC connector for 110 km transmission, 0 to 60°C operating temperature
SFP-1GEZXLC-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-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
SFP-1GTXRJ45-T	SFP module with 1 1000BaseT port with RJ45 connector for 100 m transmission, -40 to 75°C operating temperature

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

DR-120-24	120W/2.5A DIN-rail 24 VDC power supply with universal 88 to 132 VAC or 176 to 264 VAC input by switch, or 248 to 370 VDC input, -10 to 60°C operating temperature
DR-4524	45W/2A DIN-rail 24 VDC power supply with universal 85 to 264 VAC or 120 to 370 VDC input, -10 to 50°C operating temperature
DR-75-24	75W/3.2A DIN-rail 24 VDC power supply with universal 85 to 264 VAC or 120 to 370 VDC input, -10 to 60°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

Rack-Mounting Kits

RK-4U	19-inch rack-mounting kit
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