

# SDS-3016シリーズ

## 産業用14+2Gポートギガビットスマートイーサネットスイッチ



### 機能と特長

- 狭いスペースにも収まるコンパクトで柔軟な筐体設計
- 簡単にデバイス設定と管理ができる、WebベースGUI
- 統計情報によるポート診断で問題を検出、防止
- 多言語Web GUI：英語、繁体字中国語、簡体字中国語、日本語、ドイツ語、フランス語
- ネットワーク冗長性を実現するRSTP/STPをサポート
- IEC 62439-2に基づくMRP冗長性をサポートし、高いネットワーク可用性を確保
- EtherNet/IP、PROFINET、およびModbus/TCP産業プロトコルに対応し、オートメーションHMI/SCADAシステムで簡単な統合と監視を実現
- IPポートバインディングにより、IPアドレスの再割り当てなしで重要なデバイスを迅速に交換
- ローターリーDIPスイッチは、Webブラウザを使用せずにプロファイルベースの設定を実行
- IEC 62443に基づくセキュリティ機能

### 認証



### 製品紹介

SDS-3016スマートイーサネットスイッチは、IAエンジニアやオートメーションマシンのメーカーが、使用するネットワークがインダストリー4.0のビジョンに準拠していることを確認するための理想的な製品です。マシンやコントロールキャビネットに息を吹き込み、スマートスイッチの簡単な設定と簡単な設置作業により日常業務が簡略化されます。さらに、監視機能により、製品のライフサイクル全体を通じて保守が容易です。

EtherNet/IP、PROFINET、およびModbus TCPを含む、最も頻繁に使用されるプロトコルをSDS-3016スイッチに組み込み、オートメーションHMIから制御と確認を可能にすることで、運用パフォーマンスと柔軟性の向上を実現しています。さらに、IEEE 802.1Q VLAN、ポートミラーリング、SNMP、リレー警告、および多言語Web GUIなど、役に立つ管理機能を多数サポートしています。

### その他の機能とメリット

- 迅速なネットワーク冗長性のためにIEEE 802.1D-2004およびIEEE 802.1w STP/RSTPをサポート
- ネットワーク計画を容易にするIEEE 802.1Q VLAN
- イベントログと設定バックアップを迅速化するためのABC-02-USB自動バックアップコンフィギュレータをサポート。デバイスの切り替えやファームウェアのアップグレードを迅速化することも可能
- リレー出力を通じた例外による自動警告
- 未使用のポートロック、SNMPv3、HTTPSを使用してネットワークセキュリティを強化
- 自己定義の管理および/またはユーザーアカウントのロールベースのアカウント管理
- ローカルログとインベントリファイルのエクスポート機能により、在庫管理を簡素化

### 仕様

#### 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

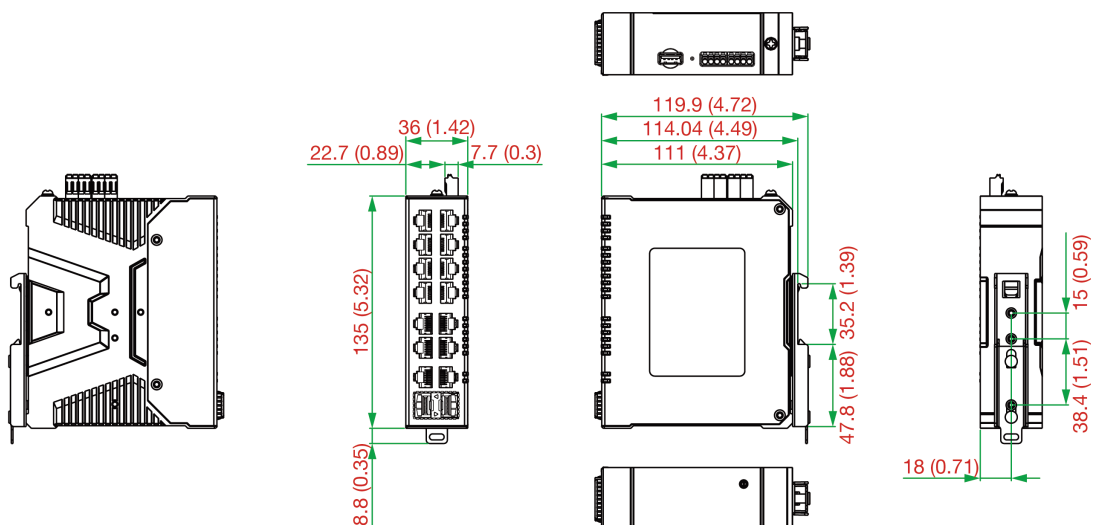
Warranty Period	5 years
Details	See <a href="http://www.moxa.com/jp/warranty">www.moxa.com/jp/warranty</a>

## 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

## 寸法

単位: mm (インチ)



## 注文情報

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

## アクセサリ (別売)

### 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 1000BaseEZX port with LC connector for 110 km transmission, 0 to 60°C operating temperature
SFP-1GEZXLC-120	SFP module with 1 1000BaseEZX 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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