

SDS-3016シリーズ

16ポート（2つのギガビットアップリンクポートオプション付き）スマートイーサネットスイッチ



機能とメリット

- 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
- 多言語Web GUI対応：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
- RSTP/STPおよびMRPをサポートし、ネットワークの冗長性により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
- ローターリーDIPスイッチにより、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可能
- 簡単に視覚化された産業用ネットワーク管理を行うためのMXstudioに対応

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を行うことで日常業務が簡略化されます。さらに、監視可能であり、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

- 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も重要なデバイスを迅速に交換可能
- ネットワーク計画を容易にするIEEE 802.1Q VLAN
- ABC-02-USB（自動バックアップコンフィギュレータ）をサポートし、迅速なシステム設定のバックアップ/復元およびファームウェアアップグレードを実現
- 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により、ネットワークセキュリティを強化
- オンラインデバッグおよび監視用のポートミラーリング機能
- 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、在庫管理が簡素化

仕様

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)
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USB Interface

Storage Port	USB Type A (for ABC-02 only)
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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

Connection	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. SDS-3016-2GTX(-T) models: 1.08 A max. SDS-3016-2GSFP(-T) models: 1.29 A max.
Power Consumption	SDS-3016(-T) models: 7.34 W max. SDS-3016-2GTX(-T) models: 7.76 W max. SDS-3016-2GSFP(-T) models: 9.40 W 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	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 µs), 1 kV (10/700 µs) 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
Vibration	IEC 60068-2-6
Package Drop Test	ISTA 1A
Package Vibration Test	ISTA 1A

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/jp/warranty

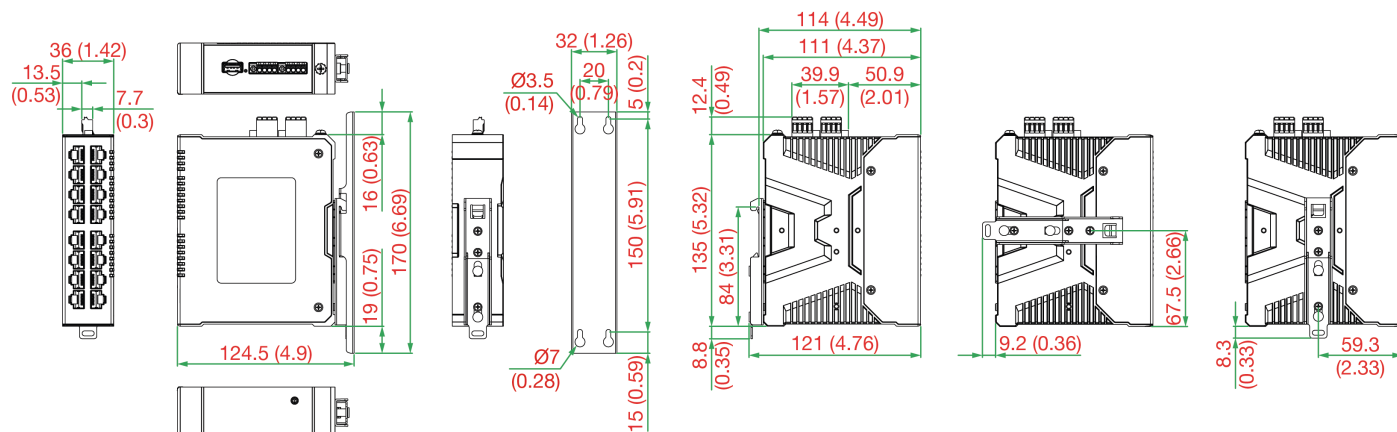
Package Contents

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

寸法

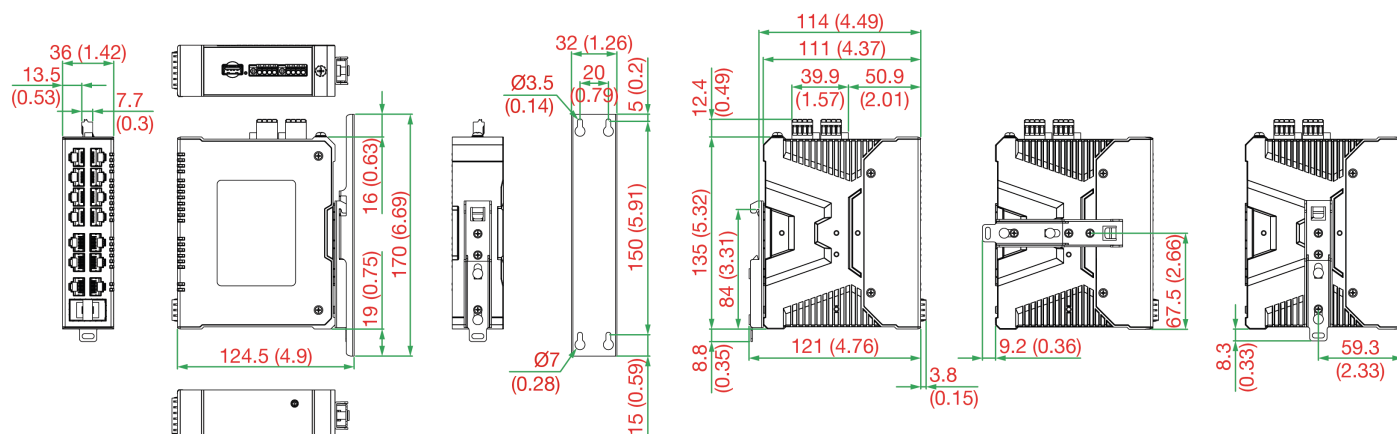
SDS-3016およびSDS-3016-2GTXモデル

単位：mm（インチ）



SDS-3016-2GSFPモデル

単位：mm（インチ）



注文情報

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

アクセサリ（別売）

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-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-1GLHXL	SFP module with 1 1000BaseLHX port with LC connector for 40 km transmission, 0 to 60°C operating temperature
SFP-1GLSXL	SFP module with 1 1000BaseLSX port with LC connector for 1km/2km transmission, 0 to 60°C operating temperature
SFP-1GLXL	SFP module with 1 1000BaseLX port with LC connector for 10 km transmission, 0 to 60°C operating temperature
SFP-1GSXL	SFP module with 1 1000BaseSX port with LC connector for 300m/550m transmission, 0 to 60°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-1GLHLC-T	SFP module with 1 1000BaseLH port with LC connector for 30 km transmission, -40 to 85°C operating temperature
SFP-1GLHXL-T	SFP module with 1 1000BaseLHX port with LC connector for 40 km transmission, -40 to 85°C operating temperature
SFP-1GLSXL-T	SFP module with 1 1000BaseLSX port with LC connector for 1km/2km transmission, -40 to 85°C operating temperature
SFP-1GLXL-T	SFP module with 1 1000BaseLX port with LC connector for 10 km transmission, -40 to 85°C operating temperature
SFP-1GSXL-T	SFP module with 1 1000BaseSX port with LC connector for 300m/550m transmission, -40 to 85°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-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-1FELLT	SFP module with 1 100Base single-mode with LC connector for 80 km transmission, -40 to 85°C operating temperature
SFP-1FEMLT	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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