# EDS-P510Aシリーズ

## 8つのIEEE 802.3af/at PoE+ポート付きの8+2GポートギガビットPoE+マネージドイーサネットスイッチ

### 機能とメリット

- IEEE 802.3af/at準拠の8つの内蔵PoE+ポート
- PoE+ポートあたり最大36 Wの出力
- 過酷な屋外環境に対応する3 kVのLANサージ保護
- 電源デバイスモード解析のためのPoE診断
- 2つの高帯域および長距離通信用ギガビットコンボポート
- -40～75°Cで240ワットのフルPoE+負荷動作が可能
- 簡単で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
- V-ON™により、ミリ秒レベルのマルチキャストデータとビデオネットワークの回復を確実に実現

### 認証

## 製品紹介

MoxaのEDS-P510Aシリーズは、8つの10/100BaseT（X）、802.3af（PoE）、および802.3at（PoE+）準拠イーサネットポート、および2つのコンボギガビットイーサネットポートを備えています。EDS-P510A-8PoEイーサネットスイッチは、標準モードでPoE+ポートあたり最大30ワットの電力を提供し、ワイパー/ヒーターを備えた耐候性IP監視カメラ、高性能無線アクセスポイント、およびIP電話などの産業用大型PoEデバイス向けに、最大36 Wの高出力を実現します。EDS-P510Aイーサネットスイッチは汎用性が高く、SFPファイバポートは高いEMI耐性を備えながらデバイスから制御センターまで最大120 kmのデータ伝送が可能です。

イーサネットスイッチは、STP/RSTP、Turbo Ring、Turbo Chain、PoE電力管理、PoEデバイス自動チェック、PoE電力スケジューリング、PoE診断、IGMP、VLAN、QoS、RMON、帯域幅管理、およびポートミラーリングに加え、さまざまな管理機能をサポートします。EDS-P510Aシリーズは、PoEシステムの信頼性を向上させるために、過酷な屋外アプリケーション向けに3 kVサージ保護を使用して設計されています。

### その他の機能とメリット

- さまざまなPoE出力設定（高出力36 W、フォースモード、レガシーモード）をサポートし、受電機器の互換性を最大化
- スマートPoE機能（PoE診断、PD障害チェック、PoEスケジューリング、PoEイベント警告）をサポートし、PoEの運用効率を向上
- 主なマネージド機能をすばやく構成するためのコマンドラインインターフェース（CLI）
- 各ポリシーに応じてIPアドレスを割り当てるDHCP Option 82
- EtherNet/IPおよびModbus TCPプロトコルをサポートし、デバイス管理と監視を実現
- Turbo RingおよびTurbo Chain（リカバリ時間はスイッチ250台で20ミリ秒未満）をサポートし、[1]RSTP/STP、およびMSTPでネットワーク冗長性を実現
- トランスペアレントデータ伝送のためのPROFINETプロトコルとの互換性
- マルチキャストトラフィックをフィルタリングするIGMPスヌーピングおよびGMRP
- ポートベースのVLAN、IEEE 802.1Q VLAN、GVRPでネットワークプランニングを簡素化
- QoS（IEEE 802.1p/1Q and TOS/DiffServ）
- 最適な帯域幅利用のためのポートトランキング
- TACACS+、IEEE 802.1X、SNMPv3、HTTPS、およびSSHにより、ネットワークセキュリティを強化
- MACアドレスに基づいて不正アクセスをブロックするロックポート機能
- 異なるレベルのネットワーク管理を実現するSNMPv1/v2c/v3
- プロアクティブで効率の高いネットワーク監視のためのRMON
- 想定外のネットワーク状況を防ぐ帯域幅管理
- オンラインデバッグ用のポートミラーリング
- メールとリレー出力を通じた例外検出による自動警告

1. ギガビットイーサネットのリカバリ時間は50ミリ秒未満です。

## 仕様

### Ethernet Interface

| | |
|---|---|
| Combo Ports (10/100/1000BaseT(X) or 100/1000BaseSFP+) | 2<br>Full/Half duplex mode<br>Auto MDI/MDI-X connection<br>Auto negotiation speed |
| PoE Ports (10/100BaseT(X), RJ45 connector) | 8<br>Full/Half duplex mode<br>Auto MDI/MDI-X connection<br>Auto negotiation speed |
| Standards | IEEE 802.1D-2004 for Spanning Tree Protocol<br>IEEE 802.1p for Class of Service<br>IEEE 802.1Q for VLAN Tagging<br>IEEE 802.1s for Multiple Spanning Tree Protocol<br>IEEE 802.1w for Rapid Spanning Tree Protocol<br>IEEE 802.1X for authentication<br>IEEE 802.3 for 10BaseT<br>IEEE 802.3ab for 1000BaseT(X)<br>IEEE 802.3ad for Port Trunk with LACP<br>IEEE 802.3af/at for PoE/PoE+ output<br>IEEE 802.3u for 100BaseT(X) and 100BaseFX<br>IEEE 802.3x for flow control<br>IEEE 802.3z for 1000BaseSX/LX/LHX/ZX |

### Ethernet Software Features

| | |
|---|---|
| Filter | GMRP, GVRP, IGMP v1/v2, Port-based VLAN |
| Industrial Protocols | EtherNet/IP, Modbus TCP |
| Management | Back Pressure Flow Control, BOOTP, DDM, DHCP Option 66/67/82, DHCP Server/Client, Fiber check, Flow control, IPv4/IPv6, LLDP, Port Mirror, RARP, RMON, SMTP, SNMP Inform, SNMPv1/v2c/v3, Syslog, Telnet, TFTP |
| MIB | Bridge MIB, Ethernet-like MIB, MIB-II, P-BRIDGE MIB, Q-BRIDGE MIB, RMON MIB Groups 1, 2, 3, 9, RSTP MIB |
| Redundancy Protocols | LACP, Link Aggregation, MSTP, RSTP, STP, Turbo Chain, Turbo Ring v1/v2 |
| Security | HTTPS/SSL, Port Lock, RADIUS, TACACS+, SSH |
| Time Management | NTP Server/Client, SNTP |

### Switch Properties

| | |
|---|---|
| IGMP Groups | 1024 |
| MAC Table Size | 8 K |
| Max. No. of VLANs | 64 |
| Packet Buffer Size | 1 Mbits |
| Priority Queues | 4 |
| VLAN ID Range | VID 1 to 4094 |

### Serial Interface

| | |
|---|---|
| Console Port | RS-232 (TxD, RxD, GND), 10-pin RJ45 (115200, n, 8, 1) |

### DIP Switch Configuration

| | |
|---|---|
| Ethernet Interface | Turbo Ring, Master, Coupler, Reserve |

## Input/Output Interface

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|---|---|
| Alarm Contact Channels | 1, Relay output with current carrying capacity of 0.5 A @ 48 VDC |
| Digital Input Channels | 1 |
| Digital Inputs | Max. input current: 8 mA<br>+13 to +30 V for state 1<br>-30 to +3 V for state 0 |

## Power Parameters

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|---|---|
| Input Voltage | 48 VDC, Redundant dual inputs |
| Operating Voltage | 44 to 57 VDC |
| Input Current | 5.36 A @ 48 VDC |
| Power Consumption (Max.) | Max. 17.28 W full loading without PDs' consumption |
| Power Budget | Max. 240 W for total PD consumption<br>Max. 36 W for each PoE port |
| Connection | 2 removable 2-contact terminal block(s) |
| Overload Current Protection | Supported |
| Reverse Polarity Protection | Supported |

## Physical Characteristics

| | |
|---|---|
| Housing | Metal |
| IP Rating | IP30 |
| Dimensions | 79.2 x 135 x 105 mm (3.12 x 5.31 x 4.13 in) |
| Weight | 1030 g (2.28 lb) |
| Installation | DIN-rail mounting, Wall mounting (with optional kit) |

## Environmental Limits

| | |
|---|---|
| Operating Temperature | EDS-P510A-8PoE-2GTXSFP: -10 to 60°C (14 to 140°F)<br>EDS-P510A-8PoE-2GTXSFP-T: -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

| | |
|---|---|
| Safety | UL 508 |
| EMC | EN 55032/24 |
| EMI | CISPR 32, FCC Part 15B Class A |
| EMS | IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV<br>IEC 61000-4-3 RS: 80 MHz to 1 GHz: 20 V/m<br>IEC 61000-4-4 EFT: Power: 2 kV; Signal: 2 kV<br>IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV<br>IEC 61000-4-6 CS: 10 V<br>IEC 61000-4-8 PFMF |
| Hazardous Locations | Class I Division 2 |
| Railway | EN 50121-4 |
| Traffic Control | NEMA TS2 |

| | |
|---|---|
| Freefall | IEC 60068-2-31 |
| Shock | IEC 60068-2-27 |
| Vibration | IEC 60068-2-6 |

### MTBF

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|---|---|
| Time | 708,972 hrs |
| Standards | Telcordia (Bellcore), GB |

### Warranty

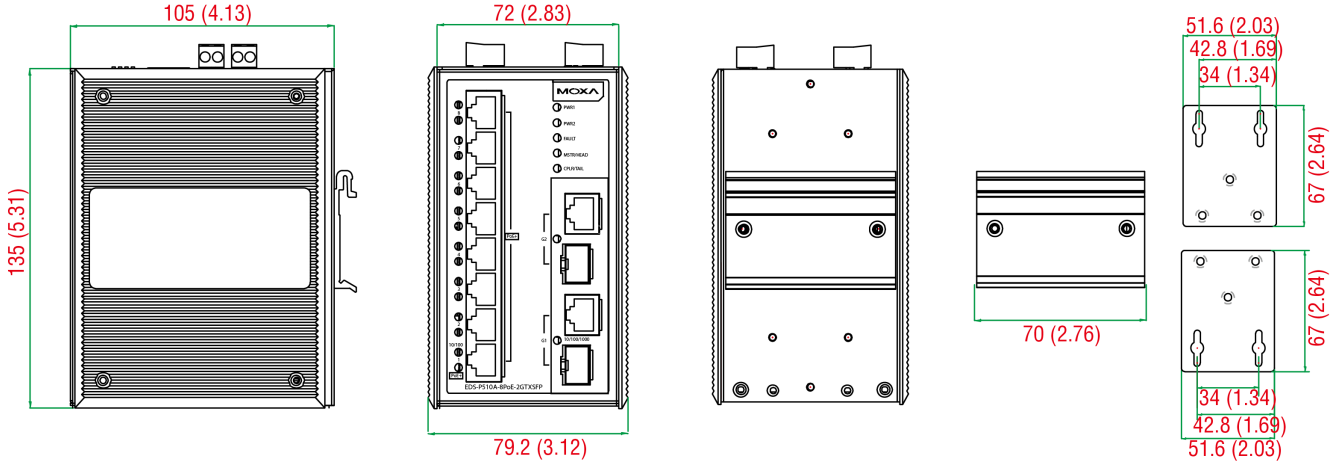
| | |
|---|---|
| Warranty Period | 5 years |
| Details | See www.moxa.com/jp/warranty |

### Package Contents

| | |
|---|---|
| Device | 1 x EDS-P510A Series switch |
| Cable | 1 x DB9 female to RJ45 10-pin |
| Installation Kit | 4 x cap, plastic, for RJ45 port<br>2 x cap, plastic, for SFP slot |
| Documentation | 1 x quick installation guide<br>1 x product certificates of quality inspection, Simplified Chinese<br>1 x product notice, Simplified Chinese<br>1 x warranty card |
| Note | SFP modules need to be purchased separately for use with this product. |

## 寸法

単位：mm（インチ）




側面図　前面図　背面図　DINレール/パネルマウントキット

## 注文情報

| Model Name | Combo Ports<br>10/100/1000BaseT(X) or 100/1000BaseSFP+ | PoE Ports<br>10/100BaseT(X), RJ45 Connector | Operating Temp. |
|---|---|---|---|
| EDS-P510A-8PoE-2GTXSFP | 2 | 8 | -10 to 60°C |
| EDS-P510A-8PoE-2GTXSFP-T | 2 | 8 | -40 to 75°C |

## アクセサリー（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-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-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 |

### Wall-Mounting Kits

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|---|---|
| WK-46-01 | Wall-mounting kit, 2 plates, 8 screws, 46 x 66.8 x 2 mm |

### Rack-Mounting Kits

| | |
|---|---|
| RK-4U | 19-inch rack-mounting kit |

### 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 |
| 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 |

### Software

| | |
|---|---|
| LIC-MXviewOne-NEW-XN-SR | MXview One node license with customizable node quantity (minimum 1 node) |