

16+2G-port Gigabit managed Ethernet switches



Features and Benefits

- 2 Gigabit plus 16 Fast Ethernet ports for copper and fiber
- Turbo Ring and Turbo Chain (recovery time < 20 ms @ 250 switches),¹ RSTP/STP, and MSTP for network redundancy
- TACACS+, SNMPv3, IEEE 802.1X, HTTPS, and SSH to enhance network security
- Easy network management by web browser, CLI, Telnet/serial console, Windows utility, and ABC-01

Certifications



Introduction

The EDS-518A standalone 18-port managed Ethernet switches provide 2 combo Gigabit ports with built-in RJ45 or SFP slots for Gigabit fiber-optic communication. The Ethernet redundancy technologies Turbo Ring and Turbo Chain (recovery time < 20 ms) increase the reliability and speed of your network backbone. The EDS-518A switches also support advanced management and security features.

Additional Features and Benefits

- Command line interface (CLI) for quickly configuring major managed functions
 - DHCP Option 82 for IP address assignment with different policies
 - Supports EtherNet/IP and Modbus TCP protocols for device management and monitoring
 - Compatible with PROFINET protocol for transparent data transmission
 - Supports the ABC-01-USB (Automatic Backup Configurator) for system configuration backup
 - IGMP snooping and GMRP for filtering multicast traffic
- Port-based VLAN, IEEE 802.1Q VLAN, and GVRP to ease network planning
 - QoS (IEEE 802.1p and TOS/DiffServ) to increase determinism
 - Port Trunking for optimum bandwidth utilization
 - SNMPv1/v2c/v3 for different levels of network management
 - RMON for proactive and efficient network monitoring
 - Bandwidth management to prevent unpredictable network status
 - Automatic warning by exception through email and relay output

Specifications

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| Input/Output Interface | |
| Alarm Contact Channels | Resistive load: 1 A @ 24 VDC |
| 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) | EDS-518A/518A-T: 16 EDS-518A-MM-SC/MM-ST/SS-SC Series: 14 EDS-518A-SS-SC-80: 14 All models support: Auto negotiation speed Full/Half duplex mode Auto MDI/MDI-X connection |
| 100BaseFX Ports (multi-mode SC connector) | EDS-518A-MM-SC Series: 2 |

1. Gigabit Ethernet recovery time < 50 ms

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| 100BaseFX Ports (multi-mode ST connector) | EDS-518A-MM-ST Series: 2 | | | | |
| 100BaseFX Ports (single-mode SC connector) | EDS-518A-SS-SC Series: 2 | | | | |
| 100BaseFX Ports, Single-Mode SC Connector, 80 km | EDS-518A-SS-SC-80 Series: 2 | | | | |
| Combo Ports (10/100/1000BaseT(X) or 1000BaseSFP) | 2 | | | | |
| Optical Fiber | | | 100BaseFX | | |
| | | | Multi-Mode | Single-Mode | |
| | Fiber Cable Type | OM1 | 50/125 μm | G.652 | |
| | | | 800 MHz x km | | |
| | Typical Distance | | 4 km | 5 km | 40 km |
| | Wavelength | Typical (nm) | 1300 | | 1310 |
| | | TX Range (nm) | 1260 to 1360 | | 1280 to 1340 |
| | | RX Range (nm) | 1100 to 1600 | | 1100 to 1600 |
| | Optical Power | TX Range (dBm) | -10 to -20 | | 0 to -5 |
| | | RX Range (dBm) | -3 to -32 | | -3 to -34 |
| | | Link Budget (dB) | 12 | | 29 |
| | | Dispersion Penalty (dB) | 3 | | 1 |
| | Note: When connecting a single-mode fiber transceiver, we recommend using an attenuator to prevent damage caused by excessive optical power. | | | | |
| | Note: Compute the “typical distance” of a specific fiber transceiver as follows: Link budget (dB) > dispersion penalty (dB) + total link loss (dB). | | | | |
| | Standards | IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseT(X) and 100BaseFX IEEE 802.3ab for 1000BaseT(X) IEEE 802.3z for 1000BaseSX/LX/LHX/ZX IEEE 802.1X for authentication IEEE 802.1D-2004 for Spanning Tree Protocol IEEE 802.1w for Rapid Spanning Tree Protocol IEEE 802.1s for Multiple Spanning Tree Protocol IEEE 802.1Q for VLAN Tagging IEEE 802.1p for Class of Service IEEE 802.3x for flow control IEEE 802.3ad for Port Trunk with LACP | | | |
| Ethernet Software Features | | | | | |
| Filter | 802.1Q VLAN, Port-based VLAN, IGMP v1/v2, GVRP, GMRP | | | | |
| Industrial Protocols | EtherNet/IP, Modbus TCP, PROFINET | | | | |
| Management | IPv4/IPv6, SNMPv1/v2c/v3, LLDP, Port Mirror, Back Pressure Flow Control, BOOTP, DDM, DHCP Option 66/67/82, DHCP Server/Client, Flow control, RARP, RMON, SMTP, SNMP Inform, Syslog, Telnet, TFTP | | | | |
| MIB | MIB-II, Bridge MIB, Ethernet-like MIB, P-BRIDGE MIB, Q-BRIDGE MIB, RMON MIB Groups 1, 2, 3, 9, RSTP MIB | | | | |
| Redundancy Protocols | STP, MSTP, RSTP, LACP, Link Aggregation, Turbo Chain, Turbo Ring v1/v2 | | | | |
| Security | HTTPS/SSL, TACACS+, Port Lock, RADIUS, SSH, Broadcast storm protection | | | | |
| Time Management | NTP Server/Client, SNTP | | | | |

Switch Properties

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| IGMP Groups | 256 |
| MAC Table Size | 8 K |
| Max. No. of VLANs | 64 |
| Packet Buffer Size | 2 Mbits |
| Priority Queues | 4 |
| VLAN ID Range | VID 1 to 4094 |

LED Interface

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| LED Indicators | PWR1, PWR2, FAULT, 10/100M (TP port), 100M (fiber port), 1000M (Gigabit port), MSTR/HEAD, CPLR/TAIL |
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Serial Interface

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

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| Ethernet Interface | Turbo Ring, Master, Coupler, Reserve |
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Power Parameters

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| Connection | 2 removable 6-contact terminal block(s) |
| Input Current | EDS-518A/518A-T: 0.44 A @ 24 VDC EDS-518A-MM-SC/MM-ST/SS-SC Series: 0.52 A @ 24 VDC EDS-518A-SS-SC-80: 0.52 A @ 24 VDC |
| Input Voltage | 24 VDC, Redundant dual inputs |
| Operating Voltage | 12 to 45 VDC |
| Overload Current Protection | Supported |
| Reverse Polarity Protection | Supported |

Physical Characteristics

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| Housing | Metal |
| IP Rating | IP30 |
| Dimensions | 94 x 135 x 142.7 mm (3.7 x 5.31 x 5.62 in) |
| Weight | 1630 g (3.60 lb) |
| Installation | DIN-rail mounting, Wall mounting (with optional kit) |

Environmental Limits

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| Operating Temperature | Standard Models: 0 to 60°C (32 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) |

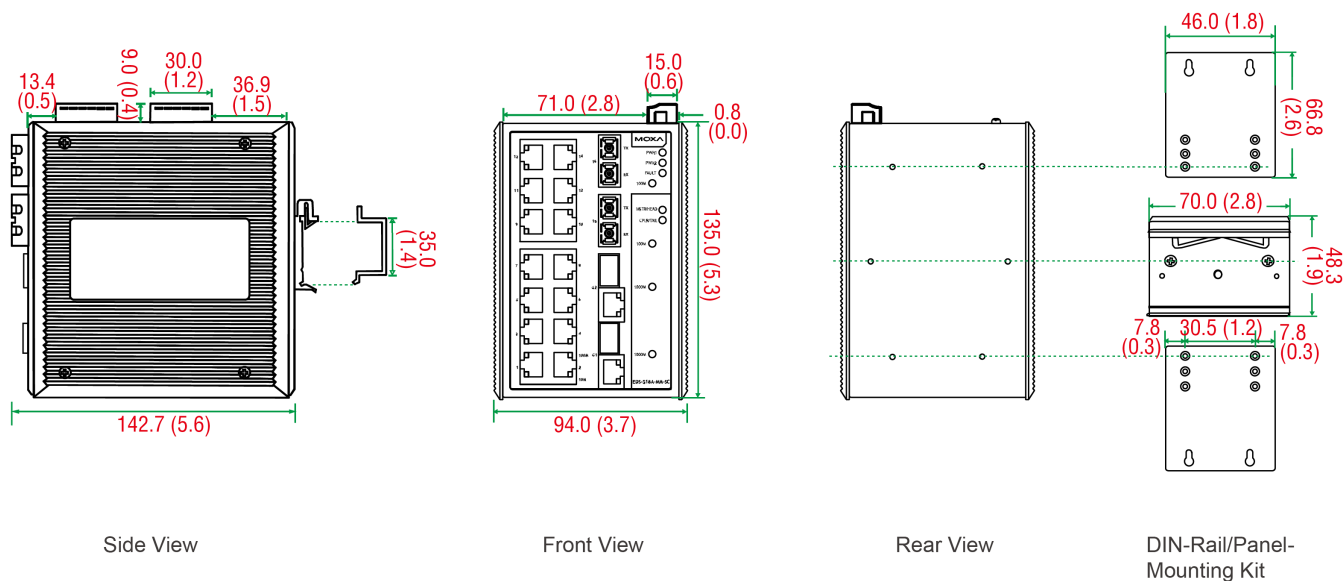
Standards and Certifications

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|---------------------|---|
| Safety | EN 60950-1, UL 60950-1, CSA C22.2 No. 60950-1, UL 508 |
| Hazardous Locations | ATEX, Class I Division 2 |
| EMC | EN 55032/24 |

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|-------------------------|--|
| 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 1 GHz: 10 V/m IEC 61000-4-4 EFT: Power: 1 kV; Signal: 0.5 kV IEC 61000-4-5 Surge: Power: 2 kV; Signal: 1 kV IEC 61000-4-6 CS: 10 V IEC 61000-4-8 PFMF |
| Maritime | DNV-GL, NK |
| Shock | IEC 60068-2-27 |
| Freefall | IEC 60068-2-32 |
| Vibration | IEC 60068-2-6 |
| MTBF | |
| Time | 250,966 hrs |
| Standards | Telcordia (Bellcore), GB |
| Warranty | |
| Warranty Period | 5 years |
| Details | See www.moxa.com/warranty |
| Package Contents | |
| Device | 1 x EDS-518A Series switch |
| Cable | 1 x DB9 female to RJ45 10-pin |
| Installation Kit | 4 x cap, plastic, for RJ45 port 2 x cap, plastic, for SFP slot 2 x cap, plastic, for SC fiber port (-SC models) 2 x cap, plastic, for ST fiber port (-ST models) |
| Documentation | 1 x document and software CD 1 x quick installation guide 1 x warranty card 1 x product certificates of quality inspection, Simplified Chinese 1 x product notice, Simplified Chinese |
| Note | SFP modules need to be purchased separately for use with this product. |

Dimensions

Unit: mm (inch)



Ordering Information

| Model Name | 10/100BaseT(X) Ports RJ45 Connector | Combo Ports 10/100/ 1000BaseT(X) or 1000BaseSFP | 100BaseFX Ports Multi-Mode, SC Connector | 100BaseFX Ports Multi-Mode, ST Connector | 100BaseFX Ports Single-Mode, SC Connector | 100BaseFX Ports Single-Mode, SC Connector, 80 km | Operating Temp. |
|-------------------|--|--|--|--|---|---|-----------------|
| EDS-518A | 16 | 2 | – | – | – | – | 0 to 60°C |
| EDS-518A-T | 16 | 2 | – | – | – | – | -40 to 75°C |
| EDS-518A-MM-SC | 14 | 2 | 2 | – | – | – | 0 to 60°C |
| EDS-518A-MM-SC-T | 14 | 2 | 2 | – | – | – | -40 to 75°C |
| EDS-518A-MM-ST | 14 | 2 | – | 2 | – | – | 0 to 60°C |
| EDS-518A-MM-ST-T | 14 | 2 | – | 2 | – | – | -40 to 75°C |
| EDS-518A-SS-SC | 14 | 2 | – | – | 2 | – | 0 to 60°C |
| EDS-518A-SS-SC-T | 14 | 2 | – | – | 2 | – | -40 to 75°C |
| EDS-518A-SS-SC-80 | 14 | 2 | – | – | – | 2 | 0 to 60°C |

Accessories (sold separately)

Software

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| MXview | Industrial network management software designed for converged automation networks |
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Storage Kits

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| ABC-01 | Configuration backup and restoration tool for managed Ethernet switches and AWK Series wireless APs/bridges/clients, 0 to 60°C operating temperature |
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SFP Modules

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| 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 |

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|-----------|---|
| 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 |

Wall-Mounting Kits

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| WK-46 | Wall-mounting kit, 2 plates, 8 screws, 46.5 x 66.8 x 1 mm |
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Rack-Mounting Kits

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