

# EDS-518A Series

## 16+2G-port Gigabit managed Ethernet switch



- > 2 Gigabit plus 16 fast Ethernet ports for copper and fiber
- > Turbo Ring (recovery time < 20 ms), RSTP/STP (IEEE 802.1w/D) for Ethernet redundancy
- > QoS, IGMP snooping/GMRP, VLAN, LACP, SNMP V1/V2c/V3, RMON supported
- > IEEE 802.1X and https/SSL enhance network security
- > ABC-01 (Automatic Backup Configurator) for system configuration backup

The certification logos shown here apply to some or all of the products in this section. Please see the **Specifications** section or Moxa's website for details.



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Industrial Ethernet Infrastructure > EDS-518A Series

### Introduction

The EDS-518A is a standalone 18-port managed Ethernet switch that provides 2 combo Gigabit ports with built-in RJ45 or SFP ports for Gigabit optic communication. The Ethernet Redundant Turbo Ring (recovery time < 20 ms) increases the reliability and speed of your

network backbone. The EDS-518A also supports intelligent network management functions, including QoS, IGMP Snooping/GMRP, VLAN, Port Trunking, SNMP V1/V2c/V3, IEEE 802.1X, and https/SSL.

### Features and Benefits

- Turbo Ring (recovery time < 20 ms at full load) and RSTP/STP (IEEE 802.1w/D)
- 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

- IEEE 802.1X and https/SSL to enhance network security
- SNMP V1/V2c/V3 for different levels of network management
- RMON for efficient network monitoring and proactive capability
- Bandwidth management prevents unpredictable network status
- ABC-01 (Automatic Backup Configurator) for system configuration backup
- Port mirroring for online debugging
- Automatic warning through e-mail and relay output
- Digital inputs to integrate sensors and alarms with IP networks
- DIN-Rail or panel mounting capability

### Specifications

#### Technology

**Standards:** IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X) and 100Base FX, IEEE 802.3x for Flow Control, IEEE 802.1D for Spanning Tree Protocol, IEEE 802.1w for Rapid STP, IEEE 802.1Q for VLAN Tagging, IEEE 802.1p for Class of Service, IEEE 802.1X for Authentication, IEEE 802.3ad for Port Trunk with LACP, IEEE 802.3ab for 1000BaseT(X), IEEE 802.3z for 1000BaseSX/LX/LHX/ZX

**Protocols:** IGMP V1/V2/V3 device, GMRP, GVRP, SNMP V1/V2c/V3, DHCP Server/Client, DHCP Option 82, BootP, TFTP, SNMP, SMTP, RARP, RMON

**MIB:** MIB-II, Ethernet-Like MIB, P-BRIDGE MIB, Q-BRIDGE MIB, Bridge MIB, RSTP MIB, RMON MIB Group 1, 2, 3, 9

**Flow Control:** IEEE 802.3x flow control, back pressure flow control Interface

#### Switch Properties

**Priority Queues:** 4

**Max. Number of Available VLANs:** 64

**Number of VLAN IDs:** VID 1 to 4094

**IGMP Groups:** 256

#### Interface

**RJ45 Ports:** 10/100BaseT(X) or 10/100/1000BaseT(X) auto negotiation speed

**Fiber Ports:** 100BaseFX (SC/ST connector), and optional 1000BaseSX/LX/LHX/ZX (SFP slot, LC connector)

**Console:** RS-232 (RJ45)

**LED Indicators:** PWR1, PWR2, FAULT, 10/100M (TP port), 100M (Fiber port), MASTER, COUPLER

**Alarm Contact:** Two relay outputs with current carrying capacity of 1A @ 24 VDC

**Digital Inputs:** Two inputs with the same ground, but electrically isolated from the electronics

- +13 to +30V for state "1"
- -30 to +3V for state "0"
- Max. input current: 8 mA

#### Optical Fiber

	100BaseFX		
	Multi Mode	Single Mode	Single Mode, 80 km
Wavelength	1300 nm	1310 nm	1550 nm
Max. TX	-10 dBm	0 dBm	0 dBm
Min. TX	-20 dBm	-5 dBm	-5 dBm
RX Sensitivity	-32 dBm	-34 dBm	-34 dBm
Link Budget	12 dB	29 dB	29 dB
Typical Distance	5 km <sup>a</sup> 4 km <sup>b</sup>	40 km <sup>c</sup>	80 km <sup>d</sup>
Saturation	-6 dBm	-3 dBm	-3 dBm

- a. 50/125 μm, 800 MHz\*km fiber optic cable
- b. 62.5/125 μm, 500 MHz\*km fiber optic cable
- c. 9/125 μm, 3.5 PS/(nm\*km) fiber optic cable
- d. 9/125 μm, 19 PS/(nm\*km) fiber optic cable

**Power Requirements**

**Input Voltage:** 24 VDC (12 to 45 VDC), redundant dual inputs  
**Input Current (@ 24 V):** 0.51A (EDS-518A), 0.61A (EDS-518A-MM, EDS-518A-SS)  
**Connection:** Two removable 6-pin terminal blocks  
**Overload Current Protection:** Present  
**Reverse Polarity Protection:** Present

**Physical Characteristics**

**Housing:** Metal, IP30 protection  
**Dimensions (W x H x D):** 94 x 135 x 142.7 mm (3.7 x 5.31 x 5.62 in.)  
**Weight:** 1630 g  
**Installation:** DIN-Rail mounting, wall mounting (optional kit)

**Environmental Limits**

**Operating Temperature:** 0 to 60°C (32 to 140°F)  
 -40 to 75°C (-40 to 167°F) for T models  
**Storage Temperature:** -40 to 85°C (-40 to 185°F)  
**Ambient Relative Humidity:** 5 to 95% (non-condensing)

**Regulatory Approvals**

**Safety:** UL508, UL60950-1, CSA C22.2 No. 60950-1, EN60950-1

**Hazardous Location:**

UL/cUL Class I, Division 2, Groups A, B, C, and D (Pending);  
 ATEX Class I, Zone 2, EEx nC IIC (Pending)

**Maritime:** DNV, GL

**EMI:** FCC Part 15, CISPR (EN55022) class A

**EMS:** EN61000-4-2 (ESD), level 2  
 EN61000-4-3 (RS), level 3  
 EN61000-4-4 (EFT), level 2  
 EN61000-4-5 (Surge), level 3  
 EN61000-4-6 (CS), level 3  
 EN61000-4-8  
 EN61000-4-11  
 EN61000-4-12

**Shock:** IEC 60068-2-27

**Freefall:** IEC 60068-2-32

**Vibration:** IEC 60068-2-6

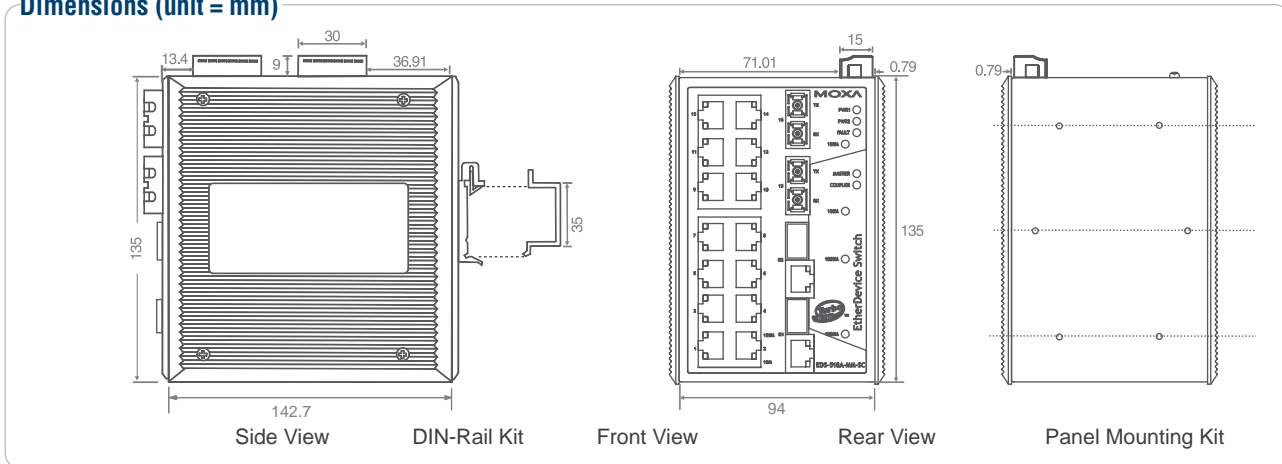
**MTBF:** 240,000 hrs  
 Database: Telcordia (Bellcore), GB

\*Please check Moxa's website for the most up-to-date certification status.

**Warranty**

5 years (see [www.moxa.com/warranty](http://www.moxa.com/warranty) for details)

**Dimensions (unit = mm)**



**Ordering Information**

Model Name		Port Interface					
		Gigabit Ethernet		Fast Ethernet			
		Combo Port, 10/100/1000BaseT(X) or 1000BaseSFP*	10/100BaseT(X)	100BaseFX			
Multi Mode, SC Connector	Multi Mode, ST Connector			Single Mode, SC Connector	Single Mode, SC Connector, 80 km		
EDS-518A	EDS-518A-T	2	16	---	---	---	---
EDS-518A-MM-SC	EDS-518A-MM-SC-T	2	14	2	---	---	---
EDS-518A-MM-ST	EDS-518A-MM-ST-T	2	14	---	2	---	---
EDS-518A-SS-SC	EDS-518A-SS-SC-80	2	14	---	---	2	---
EDS-518A-SS-SC-80		2	14	---	---	---	2

\* EDS-518A series supports 2 SFP slots. Please see page 3-33 for the product information of SFP-1G series Gigabit Ethernet SFP modules.

**Optional Accessories**

- **ABC-01:** Industrial RS-232, RJ45-based, automatic backup configurator
- **EDS-SNMP OPC Server Pro:** CD with EDS-SNMP OPC server software and manual
- **DR-4524:** 45W/2A DIN-Rail 24 VDC power supply, 85 to 264 VAC input
- **DR-75-24:** 75W/3.2A DIN-Rail 24 VDC power supply, 85 to 264 VAC input
- **DR-120-24:** 120W/5A DIN-Rail 24 VDC power supply, 88 to 132 VAC/176 to 264 VAC input by switch
- **WK-46:** Wall mounting kit
- **RK-4U:** 4U-high 19" rack mounting kit