

# EDS-518A Series

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



The certification logos shown here apply to some or all of the products in this section. For details, see "Regulatory Approvals" under "Specifications" below.

- > 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, SNMPv1/v2c/v3, RMON supported
- > IEEE 802.1X, HTTPS, and SSH enhance network security
- > ABC-01 (Automatic Backup Configurator) for system configuration backup



### Introduction

The EDS-518A is a standalone 18-port managed Ethernet switch that provides 2 combo Gigabit ports with built-in RJ45 or SFP slots for Gigabit fiber 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, SNMPv1/v2c/v3, IEEE 802.1X, HTTPS, and SSH.

### Features and Benefits

- IPv6 Ready logo awarded (IPv6 Logo Committee certified)
- IEEE 1588 PTP (Precision Time Protocol) for precise time synchronization of networks
- DHCP Option 82 for IP address assignment with different policies
- Modbus/TCP industrial Ethernet protocol supported
- IEC 61850 GOOSE messaging compliance
- 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, HTTPS, and SSH to enhance network security
- SNMPv1/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 by exception through e-mail, relay output

### Specifications

#### Technology

##### Standards:

IEEE 802.3 for 10BaseT  
 IEEE 802.3u for 100BaseT(X) and 100Base FX  
 IEEE 802.3ab for 1000BaseT(X)  
 IEEE 802.3z for 1000BaseSX/LX/LHX/ZX/EZX  
 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

**Protocols:** IGMPv1/v2 device, GMRP, GVRP, SNMPv1/v2c/v3, DHCP Server/Client, DHCP Option 66/67/82, BootP, TFTP, SNTP, SMTP, RARP, RMON, HTTP, HTTPS, Telnet, SSH, Syslog, SNMP Inform, Modbus/TCP, LLDP, IEEE 1588 PTP, IPv6

**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

#### Switch Properties

**Priority Queues:** 4

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

**VLAN ID Range:** VID 1 to 4094

**IGMP Groups:** 256

#### Interface

**Fiber Ports:** 100BaseFX (SC/ST connector) and 1000BaseSFP slot

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

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

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

**Alarm Contact:** 2 relay outputs with current carrying capacity of 1 A @ 24 VDC

**Digital Inputs:** 2 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  $\mu$ m, 800 MHz\*km fiber optic cable
- b. 62.5/125  $\mu$ m, 500 MHz\*km fiber optic cable
- c. 9/125  $\mu$ m single-mode fiber optic cable
- d. 9/125  $\mu$ m single-mode fiber optic cable (80 km)

### Power Requirements

**Input Voltage:** 24 VDC (12 to 45 VDC), redundant dual inputs

**Input Current:**

EDS-518A: 0.51 A @ 24 V  
EDS-518A-MM/SS: 0.61 A @ 24 V

**Overload Current Protection:** Present

**Connection:** 2 removable 6-contact terminal blocks

**Reverse Polarity Protection:** Present

### Physical Characteristics

**Housing:** Metal, IP30 protection

**Dimensions:** 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 (with optional kit)

### Environmental Limits

**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:** -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, Ex nC IIC (Pending)

**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

**Maritime:** DNV, GL

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

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

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

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

### MTBF (mean time between failures)

**Time:** 240,000 hrs

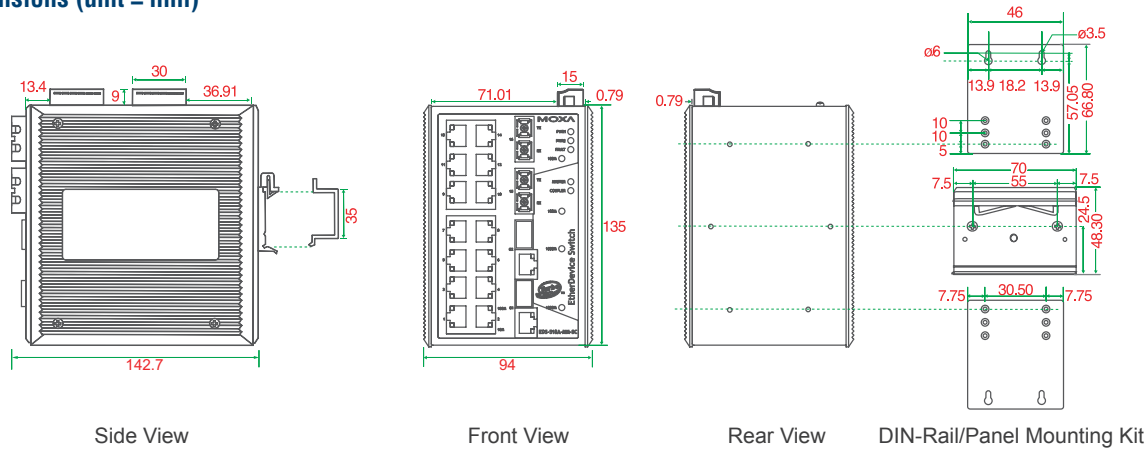
**Database:** Telcordia (Bellcore), GB

### Warranty

**Warranty Period:** 5 years

**Details:** See [www.moxa.com/warranty](http://www.moxa.com/warranty)

### Dimensions (unit = mm)



### Ordering Information

Available Models		Port Interface					
		Gigabit Ethernet		Fast Ethernet			
Standard Temperature (0 to 60°C)	Wide Temperature (-40 to 75°C)	Combo Port, 10/100/1000BaseT(X) or 1000BaseSFP*		100BaseFX			
		10/100BaseT(X)	10/100BaseT(X)	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-T	2	14	---	---	2	---
EDS-518A-SS-SC-80	---	2	14	---	---	---	2

*Note: The EDS-518A series supports 2 1000BaseSFP slots. See page 3-45 for SFP-1G series Gigabit Ethernet SFP module product information.*

### Optional Accessories (can be purchased separately)

**EDS-SNMP OPC Server Pro:** OPC server software that works with all SNMP devices

**ABC-01:** Configuration backup and restoration tool for managed Ethernet switches, 0 to 60°C operating temperature

**DR-4524/75-24/120-24:** 45/75/120 W DIN-Rail 24 VDC power supplies

**MDR-40-24/60-24:** 40/60 W DIN-Rail 24 VDC power supplies, -20 to 70°C operating temperature

**WK-46:** Wall mounting kit

**RK-4U:** 4U-high 19" rack mounting kit