

# EDS-518A Series

## 16+2G-Port Gigabit Managed Ethernet Switch



### Features

- 2 Gigabit plus 16 fast Ethernet ports for copper and fiber
- Turbo Ring (recovery time < 20 ms), RSTP/STP (IEEE802.1W/D) for Ethernet redundancy
- QoS, IGMP snooping/GMRP, VLAN, LACP, SNMP V1/V2c/V3, RMON supported
- IEEE802.1X and https/SSL enhance network security
- ABC-01 (Automatic Backup Configurator) for system configuration backup



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Industrial Ethernet Switches

### Features

#### Industrial Networking Capability

- Turbo Ring (recovery time < 20 ms at full load) and RSTP/STP (IEEE802.1W/D)
- IGMP Snooping and GMRP for filtering multicast traffic from industrial Ethernet Protocols
- Port based IEEE802.1Q VLAN and GVRP protocol to ease network planning
- QoS-IEEE802.1p/1Q and TOS/DiffServ to increase determinism
- 802.3ad, LACP for optimum bandwidth utilization
- IEEE802.1X 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

#### Designed for Industrial Applications

- Bandwidth management prevents unpredictable network status
- ABC-01 (Automatic Backup Configurator) for system configuration backup
- Port Lock for access from unauthorized MAC address

- Port mirroring for online debugging
- Automatic warning through e-mail and relay output
- Digital inputs to integrate sensors and alarms with IP networks
- Automatic recovery of connected device's IP addresses
- Line-swap fast recovery
- IP30, rugged high-strength case
- Long-haul transmit distance of 40 km or 80 km
- DIN-Rail or panel mounting capability
- Ping commands to identify network segment integrity
- Redundant dual 12-45 VDC power inputs and over current protection

#### Recommended Software and Accessories

- ABC-01 RS-232 RJ45-based Automatic Backup Configurator
- EDS-SNMP OPC Server Pro
- DR series DIN-Rail 24 VDC power supplies

### Introduction

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. EDS-518A also supports intelligent network management functions, including QoS, IGMP Snooping/GMRP, VLAN, Port Trunking, SNMP V1/V2c/V3, IEEE802.1X, and https/SSL.

### Specifications

#### Technology

**Standards:** IEEE802.3, 802.3u, 802.3x, 802.1D, 802.1W, 802.1Q, 802.1p, 802.1X, 802.3ad, 802.3z

**Protocols:** IGMP V1/V2/V3 device, GMRP, GVRP, SNMP V1/V2c/V3, DHCP Server/Client, DHCP Option 82, BootP, TFTP, SNTP, 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:** IEEE802.3x flow control, back pressure flow control Interface

#### 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 (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

#### Distance:

Multi mode: 0 to 5 km, 1300 nm (50/125 μm, 800 MHz\*km)  
0 to 4 km, 1300 nm (62.5/125 μm, 500 MHz\*km)

Single mode: 0 to 40 km, 1310 nm (9/125 μm, 3.5 PS/(nm\*km))  
0 to 80 km, 1550 nm (9/125 μm, 19 PS/(nm\*km))

#### Min. TX Output:

Multi mode : -20 dBm

Single mode: 0 to 40 km, -5 dBm  
0 to 80 km, -5 dBm

#### Max. TX Output:

Multi mode : -14 dBm

Single mode: 0 to 40 km, 0 dBm  
0 to 80 km, 0 dBm

**RX Sensitivity:** -34 to -30 dBm (Multi), -36 to -32 dBm (Single)

### 1000BaseSX/LX/LHX/ZX

#### Distance:

Multi mode:

- 1000BaseSX 0 to 500 m, 850 nm (50/125 μm, 400 MHz\*km)  
0 to 275 m, 850 nm (62.5/125 μm, 200 MHz\*km)
- 1000BaseLX 0 to 1100 m, 1310 nm (50/125 μm, 800 MHz\*km)  
0 to 550 m, 1310 nm (62.5/125 μm, 500 MHz\*km)

Single mode:

- 1000BaseLX 0 to 10 km, 1310 nm (9/125 μm, 3.5 PS/(nm\*km))
- 1000BaseLHX 0 to 40 km, 1310 nm (9/125 μm, 3.5 PS/(nm\*km))
- 1000BaseZX 0 to 80 km, 1550 nm (9/125 μm, 19 PS/(nm\*km))

**Min. TX Output:** SFP-1GSXLC -9.5 dBm  
SFP-1GLXLC -9.5 dBm  
SFP-1GLHXLC -4 dBm  
SFP-1GZXLC 0 dBm

**Max. TX Output:** SFP-1GSXLC -4 dBm  
SFP-1GLXLC -3 dBm  
SFP-1GLHXLC +1 dBm  
SFP-1GZXLC +5 dBm

**RX Sensitivity:** SFP-1GSXLC 0 to -18 dBm  
SFP-1GLXLC -3 to -20 dBm  
SFP-1GLHXLC -3 to -24 dBm  
SFP-1GZXLC -3 to -24 dBm

## Power

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

**Input Current (@24V):** 0.67A (EDS-518A), 0.78A (EDS-518A-MM, EDS-518A-SS)

**Connection:** Two removable 6-pin terminal blocks

**Overload Current Protection:** Present

**Reverse Polarity Protection:** Present

## Mechanical

**Casing:** IP30 protection

**Dimensions (W x H x D):** 95 x 135 x 140 mm  
3.74 x 5.31 x 5.51 in.

**Weight:** 1630 g

**Installation:** DIN-Rail, Wall Mounting (optional kit)

## Environmental

**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 3  
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:** IEC60068-2-27

**Freefall:** IEC60068-2-32

**Vibration:** IEC60068-2-6

**MTBF:** 240,000 hrs

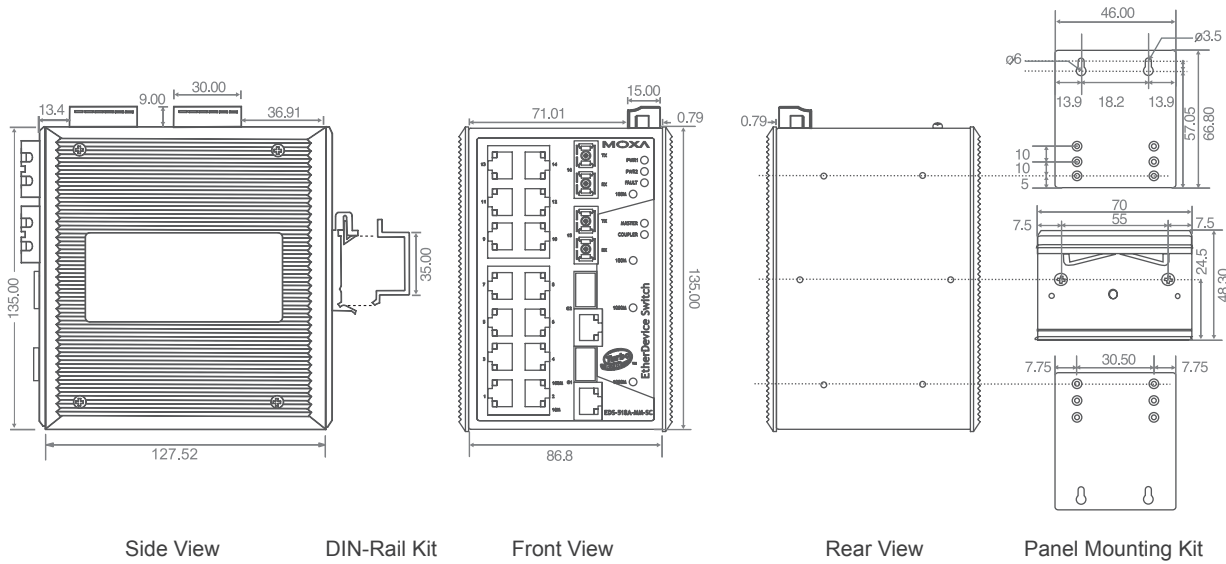
Database: Telcordia (Bellcore), GB

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

## Warranty

5 years

## Dimensions (unit = mm)



## Ordering Information

### EDS-518A-AA-BB-CC-D

Ordering Code Definition	Fiber Port	FO Connector	Single Mode Distance	Operating Temperature
	<b>MM:</b> Two Multi Mode <b>SS:</b> Two Single Mode	<b>SC:</b> SC Connector <b>ST:</b> ST Connector	<b>80:</b> 80 km	<b>T:</b> Operating Temp. -40 to 75°C (Standard Models: 0 to 60°C)
Available Models	<b>Standard:</b> <ul style="list-style-type: none"> <li>EDS-518A</li> <li>EDS-518A-MM-SC</li> <li>EDS-518A-MM-ST</li> <li>EDS-518A-SS-SC</li> </ul>		<b>Long-Haul:</b> <ul style="list-style-type: none"> <li>EDS-518A-SS-SC-80</li> </ul>	<b>Wide Temperature:</b> <ul style="list-style-type: none"> <li>EDS-518A-T</li> </ul>
Optional Accessories	<ul style="list-style-type: none"> <li><b>ABC-01:</b> Industrial RS-232, RJ45-based, Automatic Backup Configurator</li> <li><b>DR-4524:</b> 45W/2A DIN-Rail 24 VDC Power Supply, 85 to 264 VAC input</li> <li><b>DR-75-24:</b> 75W/3.2A DIN-Rail 24 VDC Power Supply, 85 to 264 VAC input</li> <li><b>DR-120-24:</b> 120W/5A DIN-Rail 24 VDC Power Supply, 88 to 132 VAC/176 to 264 VAC input by switch</li> <li><b>WK-46:</b> Wall Mounting Kit</li> </ul>			

## Gigabit Ethernet Modules, SFP-1G Series

### SFP-AGBBBBCC-D

Ordering Code Definition	Number of Gigabit Ports	Fiber ports	FO Connector	Operating Temperature
	<b>1:</b> One Fiber port	<b>SX:</b> 1000BaseSX port, 0.5 km <b>LX:</b> 1000BaseLX port, 10 km <b>LHX:</b> 1000BaseLHX port, 40 km <b>ZX:</b> 1000BaseZX port, 80 km	<b>LC:</b> LC Connector	<b>T:</b> Operating Temp. -40 to 75°C (Standard Models: 0 to 60°C)
Available Models	<b>Standard:</b> <ul style="list-style-type: none"> <li>SFP-1GSXLC</li> <li>SFP-1GLXLC</li> </ul>	<b>Long-Haul (40 km):</b> <ul style="list-style-type: none"> <li>SFP-1GLHXL</li> </ul>	<b>Long-Haul (80 km):</b> <ul style="list-style-type: none"> <li>SFP-1GZXL</li> </ul>	<b>Wide Temperature:</b> <ul style="list-style-type: none"> <li>SFP-1GSXLC-T (-20 to 75°C)</li> <li>SFP-1GLXLC-T</li> <li>SFP-1GLHXL-T</li> <li>SFP-1GZXL-T</li> </ul>