

# EDS-508A/505A Series

## 8- and 5-Port Managed Ethernet Switch



### Highlights

- Plug-n-play 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
- Customer configured e-mail notification by exception
- User-friendly web-based configuration and management
- -40 to 75°C operating temperature (T models)
- ABC-01 (Automatic Backup Configurator) for system configuration backup



### Features

#### Advanced Industrial Networking Capability

- Plug-n-Play, 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
- Port-based VLAN, 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
- Port Trunking for optimum bandwidth utilization
- RMON for efficient network monitoring and proactive capability
- SNMP V1/V2c/V3 for different levels of network management security
- IEEE802.1X and https/SSL to enhance network security

#### 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 by exception 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 (Patented)
- Redundant, dual DC power inputs
- Regular (0 to 60°C) and extended (-40 to 75°C) operating temperature models available
- IP30, rugged high-strength case
- Long-haul transmit distance of 40 km or 80 km
- DIN-Rail or panel mounting ability
- Configurable by Web browser, Telnet/Serial console, Windows utility
- Ping commands to identify network segment integrity

#### 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-508A/505A is a plug-and-play managed redundant Ethernet switch. A set of Turbo Ring DIP switches makes it easy to set up Turbo Ring (recovery time < 20 ms) to increase system reliability. In addition, EDS-508A/505A supports many advanced managed features, such

as QoS, 802.1Q VLAN, port-based VLAN, IEEE802.1X, SSL, SNMP V1/V2c/V3, IGMP Snooping, Port Trunking, and RMON for network management. The extended operating temperature range of -40 to 75°C is also available.

## Specifications

### Technology

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

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

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

**Flow Control:** IEEE802.3x flow control, back pressure flow control

### Interface

**RJ45 Ports:** 10/100BaseT(X) auto negotiation speed, F/H duplex mode, and auto MDI/MDI-X connection

**Fiber Ports:** 100BaseFX ports (SC/ST connector)

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

**LED Indicators:** PWR1, PWR2, FAULT, MASTER, COUPLER, 10/100M

**DIP Switch:** Turbo Ring, Master, Coupler, Reserve

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

**Digital Input:** 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

#### 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)

### Power

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

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

**Overload Current Protection:** Present

**Reverse Polarity Protection:** Present

### Mechanical

**Casing:** IP30 protection, aluminum case

**Dimensions (W x H x D):** 80.5 x 135 x 105 mm  
3.17 x 5.31 x 4.13 in.

**Weight:** 1040 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 4  
EN61000-4-5 (Surge), level 3  
EN61000-4-6 (CS), level 3  
EN61000-4-8  
EN61000-4-11

**Shock:** IEC60068-2-27

**Freefall:** IEC60068-2-32

**Vibration:** IEC60068-2-6

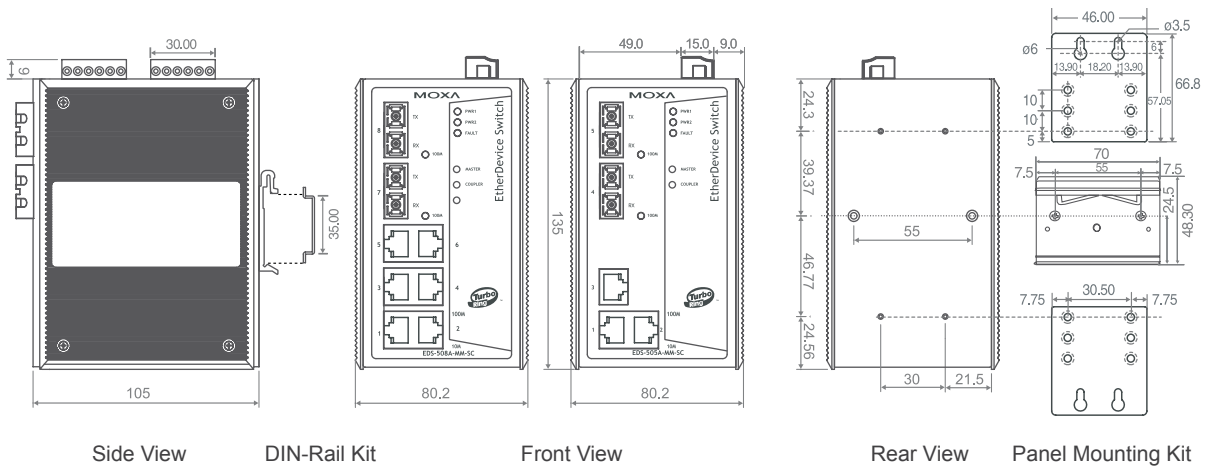
**MTBF:** EDS-508A series: 339,000 hrs  
EDS-505A series: 352,000 hrs  
Database: Telcordia (Bellcore), GB

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

### Warranty

5 years

## Dimensions (unit = mm)



## : Ordering Information

### EDS-508A/505A-AA-BB-CC-D

Ordering Code Definition	Fiber Port MM: Two Multi Mode SS: Two Single Mode	FO Connector SC: SC Connector ST: ST Connector	Single Mode Distance 80: 80 km	Operating Temperature T: Operating Temp. -40 to 75°C (Standard Models: 0 to 60°C)
Available Models	<b>EDS-508A Series</b>		<b>Long-Haul:</b> • EDS-508A-SS-SC-80	<b>Wide Temperature:</b> • EDS-508A-T • EDS-508A-MM-SC-T • EDS-508A-MM-ST-T • EDS-508A-SS-SC-T • EDS-508A-SS-SC-80-T
	<b>Standard:</b> • EDS-508A • EDS-508A-MM-SC • EDS-508A-MM-ST • EDS-508A-SS-SC			
Available Models	<b>EDS-505A Series</b>		<b>Long-Haul:</b> • EDS-505A-SS-SC-80	<b>Wide Temperature:</b> • EDS-505A-T • EDS-505A-MM-SC-T • EDS-505A-MM-ST-T • EDS-505A-SS-SC-T • EDS-505A-SS-SC-80-T
	<b>Standard:</b> • EDS-505A • EDS-505A-MM-SC • EDS-505A-MM-ST • EDS-505A-SS-SC			
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>			