

# EDS-508A Series

## 8-port managed Ethernet switches



### Features and Benefits

- Turbo Ring and Turbo Chain (recovery time < 20 ms @ 250 switches), and STP/RSTP/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
- Supports MXstudio for easy, visualized industrial network management

### Certifications



## Introduction

The EDS-508A standalone 8-port managed Ethernet switches, with their advanced Turbo Ring and Turbo Chain technologies (recovery time < 20 ms), RSTP/STP, and MSTP, increase the reliability and availability of your industrial Ethernet network. Models with a wide operating temperature range of -40 to 75°C are also available, and the switches support advanced management and security features, making the EDS-508A switches suitable for any harsh industrial environment.

### 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
- Automatic warning by exception through email and relay output
- 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/1Q and TOS/DiffServ) to increase determinism
- Port Trunking for optimum bandwidth utilization
- RMON for proactive and efficient network monitoring
- SNMPv1/v2c/v3 for different levels of network management
- Bandwidth management to prevent unpredictable network status
- Lock port function for blocking unauthorized access based on MAC address

## Specifications

### Input/Output Interface

Alarm Contact Channels	2 Relay output with current carrying capacity of 1 A @ 24 VDC
Digital Input Channels	2
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-508A Series: 8 EDS-508A-MM/SS Series: 6  All models support: Auto negotiation speed Full/Half duplex mode Auto MDI/MDI-X connection
100BaseFX Ports (multi-mode SC connector)	EDS-508A-MM-SC Series: 2

100BaseFX Ports (multi-mode ST connector)	EDS-508A-MM-ST Series: 2
100BaseFX Ports (single-mode SC connector)	EDS-508A-SS-SC Series: 2
100BaseFX Ports, Single-Mode SC Connector, 80 km	EDS-508A-SS-SC-80 Series: 2
Standards	<p>IEEE 802.3 for 10BaseT  IEEE 802.3u for 100BaseT(X) and 100BaseFX  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</p>

Optical Fiber	100BaseFX					
			Multi-Mode	Single-Mode (40 km)	Single-Mode (80 km)	
	Fiber Cable Type	OM1	50/125 $\mu$ m	G.652	G.652	
			800 MHz x km			
	Typical Distance		4 km	5 km	40 km	80 km
	Wavelength	Typical (nm)	1300		1310	1550
		TX Range (nm)	1260 to 1360		1280 to 1340	1530 to 1570
		RX Range (nm)	1100 to 1600		1100 to 1600	1100 to 1600
	Optical Power	TX Range (dBm)	-10 to -20		0 to -5	0 to -5
		RX Range (dBm)	-3 to -32		-3 to -34	-3 to -34
		Link Budget (dB)	12		29	29
		Dispersion Penalty (dB)	3		1	1
	<p>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) &gt; dispersion penalty (dB) + total link loss (dB).</p>					

<b>Ethernet Software Features</b>	
Filter	<p>802.1Q VLAN  Port-based VLAN  IGMP v1/v2  GVRP  GMRP</p>
Industrial Protocols	<p>EtherNet/IP  Modbus TCP</p>
Management	<p>IPv4/IPv6  SNMPv1/v2c/v3  LLDP  Port Mirror  Back Pressure Flow Control  BOOTP  DDM  DHCP Option 66/67/82</p>

	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
Time Management	NTP Server/Client SNTP IEEE 1588v2 PTP (software-based)

#### Switch Properties

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

#### LED Interface

LED Indicators	PWR1, PWR2, FAULT, 10/100M (TP port), 100M (fiber port), MSTR/HEAD, CPLR/TAIL
----------------	---

#### Serial Interface

Console Port	RS-232 (TxD, RxD, GND), 10-pin RJ45 (115200, n, 8, 1)
--------------	---

#### DIP Switch Configuration

Ethernet Interface	Turbo Ring, Master, Coupler, Reserve
--------------------	--------------------------------------

#### Power Parameters

Connection	2 removable 6-contact terminal block(s)
Input Voltage	12/24/48 VDC Redundant dual inputs
Operating Voltage	9.6 to 60 VDC

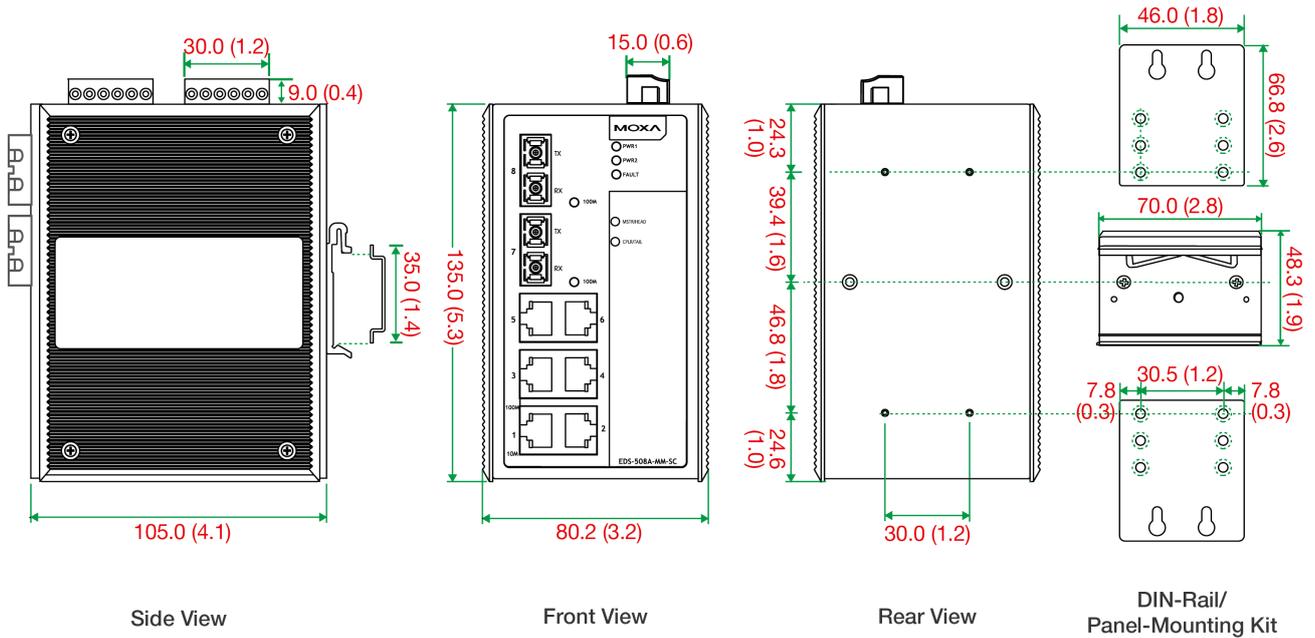
Input Current	EDS-508A Series: 0.22 A @ 24 VDC EDS-508A-MM/SS Series: 0.30 A @ 24 VDC
Overload Current Protection	Supported
Reverse Polarity Protection	Supported
<b>Physical Characteristics</b>	
Housing	Metal
IP Rating	IP30
Dimensions	80.2 x 135 x 105 mm (3.16 x 5.31 x 4.13 in)
Weight	1040 g (2.3 lb)
Installation	DIN-rail mounting Wall mounting (with optional kit)
<b>Environmental Limits</b>	
Operating Temperature	Standard Models: -10 to 60°C (14 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)
<b>Standards and Certifications</b>	
Safety	EN 62368-1 UL 60950-1 UL 508
EMC	EN 55032/35
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: 20 V/m IEC 61000-4-4 EFT: Power: 2 kV; Signal: 1 kV IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV IEC 61000-4-6 CS: 10 V IEC 61000-4-8 PFMF
Hazardous Locations	ATEX Class I Division 2
Vibration	IEC 60068-2-6
Shock	IEC 60068-2-27
Freefall	IEC 60068-2-31
Maritime	DNV
<b>MTBF</b>	
Time	EDS-508A models: 1,105,486 hrs EDS-508A-MM/SS models: 1,043,909 hrs
Standards	Telcordia (Bellcore), GB
<b>Warranty</b>	
Warranty Period	5 years
Details	See <a href="http://www.moxa.com/warranty">www.moxa.com/warranty</a>

## Package Contents

Device	1 x EDS-508A 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 SC fiber port (-SC models) 2 x cap, plastic, for ST fiber port (-ST models)
Documentation	1 x quick installation guide 1 x warranty card 1 x product certificates of quality inspection, Simplified Chinese 1 x product notice, Simplified Chinese

## Dimensions

Unit: mm (inch)



## Ordering Information

Model Name	10/100BaseT(X) Ports, RJ45 Connector	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-508A	8	-	-	-	-	-10 to 60°C
EDS-508A-T	8	-	-	-	-	-40 to 75°C
EDS-508A-MM-SC	6	2	-	-	-	-10 to 60°C
EDS-508A-MM-SC-T	6	2	-	-	-	-40 to 75°C
EDS-508A-MM-ST	6	-	2	-	-	-10 to 60°C
EDS-508A-MM-ST-T	6	-	2	-	-	-40 to 75°C
EDS-508A-SS-SC	6	-	-	2	-	-10 to 60°C
EDS-508A-SS-SC-T	6	-	-	2	-	-40 to 75°C
EDS-508A-SS-SC-80	6	-	-	-	2	-10 to 60°C
EDS-508A-SS-SC-80-T	6	-	-	-	2	-40 to 75°C

## Accessories (sold separately)

### Storage Kits

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

### Power Supplies

HDR-60-24	60 W/2.5 A DIN-rail 24 VDC power supply, universal 85 to 264 VAC or 120 to 370 VDC input voltage, -30 to 70°C operating temperature
NDR-120-24	120 W/5.0 A DIN-rail 24 VDC power supply, universal 90 to 264 VAC or 127 to 370 VDC input voltage, -20 to 70°C operating temperature
NDR-120-48	120 W/2.5 A DIN-rail 48 VDC power supply, universal 90 to 264 VAC or 127 to 370 VDC input voltage, -20 to 70°C operating temperature
NDR-240-48	240 W/5.0 A DIN-rail 48 VDC power supply, universal 90 to 264 VAC or 127 to 370 VDC input voltage, -20 to 70°C operating temperature
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

### Software

MXview-50	MXview license for 50 nodes
MXview-100	MXview license for 100 nodes
MXview-250	MXview license for 250 nodes
MXview-500	MXview license for 500 nodes
MXview-1000	MXview license for 1000 nodes
MXview-2000	MXview license for 2000 nodes
MXview Upgrade-50	MXview license expansion for 50 nodes

### Wall-Mounting Kits

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

### Rack-Mounting Kits

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

© Moxa Inc. All rights reserved. Updated Feb 26, 2024.

This document and any portion thereof may not be reproduced or used in any manner whatsoever without the express written permission of Moxa Inc. Product specifications subject to change without notice. Visit our website for the most up-to-date product information.