

# EDS-518A Series

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



### Features and Benefits

- 2 Gigabit plus 16 Fast Ethernet ports for copper and fiber
- Turbo Ring and Turbo Chain (recovery time < 20 ms @ 250 switches),<sup>1</sup> RSTP/STP, and 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

### Certifications



## Introduction

The EDS-518A standalone 18-port managed Ethernet switches provide 2 combo Gigabit ports with built-in RJ45 or SFP slots for Gigabit fiber-optic communication. The Ethernet redundancy technologies Turbo Ring and Turbo Chain (recovery time < 20 ms) increase the reliability and speed of your network backbone. The EDS-518A switches also support advanced management and security features.

### 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
- Supports the ABC-01-USB (Automatic Backup Configurator) for system configuration backup
- 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
- SNMPv1/v2c/v3 for different levels of network management
- RMON for proactive and efficient network monitoring
- Bandwidth management to prevent unpredictable network status
- Automatic warning by exception through email and relay output

## Specifications

### Input/Output Interface

Alarm Contact Channels	Resistive load: 1 A @ 24 VDC
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-518A/518A-T: 16 EDS-518A-MM-SC/MM-ST/SS-SC Series: 14 EDS-518A-SS-SC-80: 14  All models support: Auto negotiation speed Full/Half duplex mode Auto MDI/MDI-X connection
100BaseFX Ports (multi-mode SC connector)	EDS-518A-MM-SC Series: 2

1. Gigabit Ethernet recovery time < 50 ms

100BaseFX Ports (multi-mode ST connector)	EDS-518A-MM-ST Series: 2
100BaseFX Ports (single-mode SC connector)	EDS-518A-SS-SC Series: 2
100BaseFX Ports, Single-Mode SC Connector, 80 km	EDS-518A-SS-SC-80 Series: 2
Combo Ports (10/100/1000BaseT(X) or 1000BaseSFP)	2

Optical Fiber			100BaseFX		
			Multi-Mode	Single-Mode	
	Fiber Cable Type		OM1	50/125 μm	G.652
				800 MHz x km	
	Typical Distance		4 km	5 km	40 km
	Wavelength	Typical (nm)		1300	
		TX Range (nm)		1260 to 1360	
		RX Range (nm)		1100 to 1600	
	Optical Power	TX Range (dBm)		-10 to -20	
		RX Range (dBm)		-3 to -32	
		Link Budget (dB)		12	
		Dispersion Penalty (dB)		3	
<p>Note: When connecting a single-mode fiber transceiver, we recommend using an attenuator to prevent damage caused by excessive optical power.</p> <p>Note: Compute the “typical distance” of a specific fiber transceiver as follows: Link budget (dB) &gt; dispersion penalty (dB) + total link loss (dB).</p>					

Standards	<p>IEEE 802.3 for 10BaseT  IEEE 802.3u for 100BaseT(X) and 100BaseFX  IEEE 802.3ab for 1000BaseT(X)  IEEE 802.3z for 1000BaseSX/LX/LHX/ZX  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>
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Ethernet Software Features	
Filter	802.1Q VLAN, Port-based VLAN, IGMP v1/v2, GVRP, GMRP
Industrial Protocols	EtherNet/IP, Modbus TCP
Management	IPv4/IPv6, SNMPv1/v2c/v3, LLDP, Port Mirror, Back Pressure Flow Control, BOOTP, DDM, DHCP Option 66/67/82, 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, Broadcast storm protection
Time Management	NTP Server/Client, SNTP

## Switch Properties

IGMP Groups	256
MAC Table Size	8 K
Max. No. of VLANs	64
Packet Buffer Size	2 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),1000M (Gigabit port), MSTR/HEAD, CPLR/TAIL
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## Serial Interface

Console Port	RS-232 (TxD, RxD, GND), 8-pin RJ45 (115200, n, 8, 1)
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## DIP Switch Configuration

Ethernet Interface	Turbo Ring, Master, Coupler, Reserve
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## Power Parameters

Connection	2 removable 6-contact terminal block(s)
Input Current	EDS-518A/518A-T: 0.44 A @ 24 VDC EDS-518A-MM-SC/MM-ST/SS-SC Series: 0.52 A @ 24 VDC EDS-518A-SS-SC-80: 0.52 A @ 24 VDC
Input Voltage	24 VDC, Redundant dual inputs
Operating Voltage	12 to 45 VDC
Overload Current Protection	Supported
Reverse Polarity Protection	Supported

## Physical Characteristics

Housing	Metal
IP Rating	IP30
Dimensions	94 x 135 x 142.7 mm (3.7 x 5.31 x 5.62 in)
Weight	1630 g (3.60 lb)
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 (package included)	-40 to 85°C (-40 to 185°F)
Ambient Relative Humidity	5 to 95% (non-condensing)

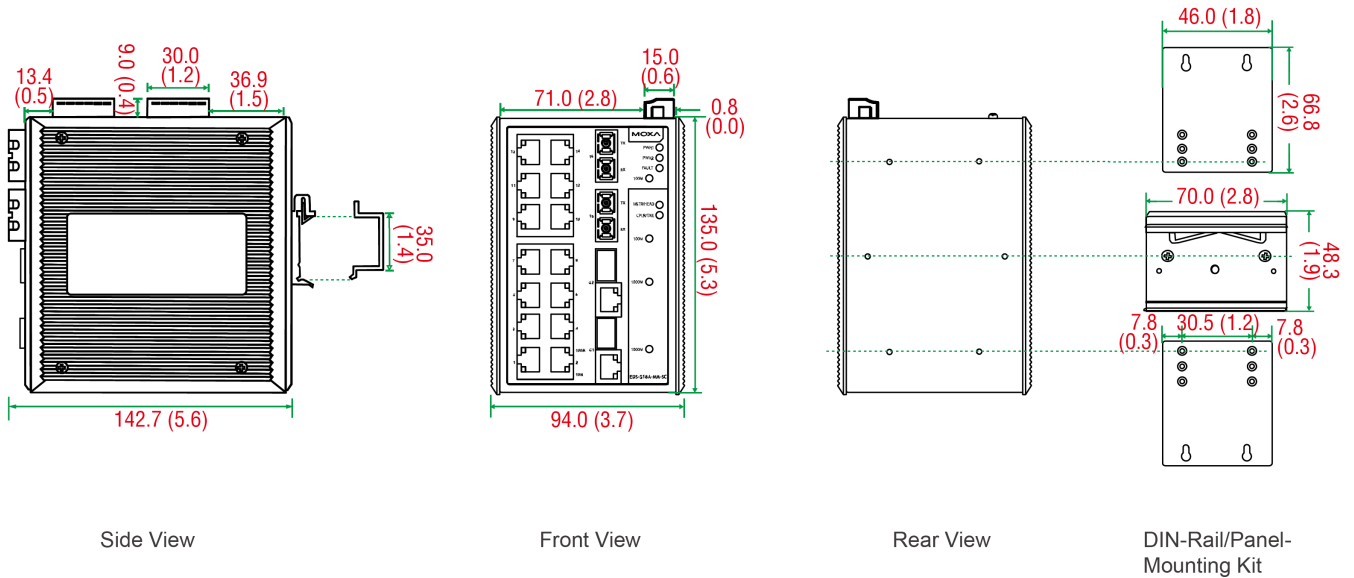
## Standards and Certifications

Safety	EN 60950-1, UL 60950-1, CSA C22.2 No. 60950-1, UL 508
Hazardous Locations	ATEX, Class I Division 2
EMC	EN 55032/24

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: 10 V/m IEC 61000-4-4 EFT: Power: 1 kV; Signal: 0.5 kV IEC 61000-4-5 Surge: Power: 2 kV; Signal: 1 kV IEC 61000-4-6 CS: 10 V IEC 61000-4-8 PFMF
Maritime	DNV-GL, NK
Shock	IEC 60068-2-27
Vibration	IEC 60068-2-6
Freefall	IEC 60068-2-31
<b>MTBF</b>	
Time	250,966 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>
<b>Package Contents</b>	
Device	1 x EDS-518A 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 SFP slot 2 x cap, plastic, for SC fiber port (-SC models) 2 x cap, plastic, for ST fiber port (-ST models)
Documentation	1 x document and software CD 1 x quick installation guide 1 x warranty card 1 x product certificates of quality inspection, Simplified Chinese 1 x product notice, Simplified Chinese
Note	SFP modules need to be purchased separately for use with this product.

## Dimensions

Unit: mm (inch)



## Ordering Information

Model Name	10/100BaseT(X) Ports RJ45 Connector	Combo Ports 10/100/1000BaseT(X) or 1000BaseSFP	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-518A	16	2	-	-	-	-	0 to 60°C
EDS-518A-T	16	2	-	-	-	-	-40 to 75°C
EDS-518A-MM-SC	14	2	2	-	-	-	0 to 60°C
EDS-518A-MM-SC-T	14	2	2	-	-	-	-40 to 75°C
EDS-518A-MM-ST	14	2	-	2	-	-	0 to 60°C
EDS-518A-MM-ST-T	14	2	-	2	-	-	-40 to 75°C
EDS-518A-SS-SC	14	2	-	-	2	-	0 to 60°C
EDS-518A-SS-SC-T	14	2	-	-	2	-	-40 to 75°C
EDS-518A-SS-SC-80	14	2	-	-	-	2	0 to 60°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
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### SFP Modules

SFP-1G10ALC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 10 km transmission; TX 1310 nm, RX 1550 nm, 0 to 60°C operating temperature
SFP-1G10ALC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 10 km transmission; TX 1310 nm, RX 1550 nm, -40 to 85°C operating temperature
SFP-1G10BLC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 10 km transmission; TX 1550 nm, RX 1310 nm, 0 to 60°C operating temperature
SFP-1G10BLC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 10 km transmission; TX 1550 nm, RX 1310 nm, -40 to 85°C operating temperature

SFP-1G20ALC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 20 km transmission; TX 1310 nm, RX 1550 nm, 0 to 60°C operating temperature
SFP-1G20ALC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 20 km transmission; TX 1310 nm, RX 1550 nm, -40 to 85°C operating temperature
SFP-1G20BLC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 20 km transmission; TX 1550 nm, RX 1310 nm, 0 to 60°C operating temperature
SFP-1G20BLC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 20 km transmission; TX 1550 nm, RX 1310 nm, -40 to 85°C operating temperature
SFP-1G40ALC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 40 km transmission; TX 1310 nm, RX 1550 nm, 0 to 60°C operating temperature
SFP-1G40ALC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 40 km transmission; TX 1310 nm, RX 1550 nm, -40 to 85°C operating temperature
SFP-1G40BLC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 40 km transmission; TX 1550 nm, RX 1310 nm, 0 to 60°C operating temperature
SFP-1G40BLC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 40 km transmission; TX 1550 nm, RX 1310 nm, -40 to 85°C operating temperature
SFP-1GEZXC	SFP module with 1 1000BaseEZC port with LC connector for 110 km transmission, 0 to 60°C operating temperature
SFP-1GEZXC-120	SFP module with 1 1000BaseEZC port with LC connector for 120 km transmission, 0 to 60°C operating temperature
SFP-1GLHLC	SFP module with 1 1000BaseLH port with LC connector for 30 km transmission, 0 to 60°C operating temperature
SFP-1GLHLC-T	SFP module with 1 1000BaseLH port with LC connector for 30 km transmission, -40 to 85°C operating temperature
SFP-1GLHXC	SFP module with 1 1000BaseLHX port with LC connector for 40 km transmission, 0 to 60°C operating temperature
SFP-1GLHXC-T	SFP module with 1 1000BaseLHX port with LC connector for 40 km transmission, -40 to 85°C operating temperature
SFP-1GLSXC	SFP module with 1 1000BaseLSX port with LC connector for 500 m transmission, 0 to 60°C operating temperature
SFP-1GLSXC-T	SFP module with 1 1000BaseLSX port with LC connector for 500 m transmission, -40 to 85°C operating temperature
SFP-1GLXC	SFP module with 1 1000BaseLX port with LC connector for 10 km transmission, 0 to 60°C operating temperature
SFP-1GLXC-T	SFP module with 1 1000BaseLX port with LC connector for 10 km transmission, -40 to 85°C operating temperature
SFP-1GSXC	SFP module with 1 1000BaseSX port with LC connector for 300/550 m transmission, 0 to 60°C operating temperature
SFP-1GSXC-T	SFP module with 1 1000BaseSX port with LC connector for 300/550 m transmission, -40 to 85°C operating temperature
SFP-1GZXC	SFP module with 1 1000BaseZX port with LC connector for 80 km transmission, 0 to 60°C operating temperature
SFP-1GZXC-T	SFP module with 1 1000BaseZX port with LC connector for 80 km transmission, -40 to 85°C operating temperature

## Power Supplies

DR-120-24	120W/2.5A DIN-rail 24 VDC power supply with universal 88 to 132 VAC or 176 to 264 VAC input by switch, or 248 to 370 VDC input, -10 to 60°C operating temperature
DR-4524	45W/2A DIN-rail 24 VDC power supply with universal 85 to 264 VAC or 120 to 370 VDC input, -10 to 50°C operating temperature
DR-75-24	75W/3.2A DIN-rail 24 VDC power supply with universal 85 to 264 VAC or 120 to 370 VDC input, -10 to 60°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

## Wall-Mounting Kits

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

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

MXview-50	Industrial network management software with a license for 50 nodes (by IP address)
MXview-100	Industrial network management software with a license for 100 nodes (by IP address)
MXview-250	Industrial network management software with a license for 250 nodes (by IP address)
MXview-500	Industrial network management software with a license for 500 nodes (by IP address)
MXview-1000	Industrial network management software with a license for 1000 nodes (by IP address)
MXview-2000	Industrial network management software with a license for 2000 nodes (by IP address)
MXview Upgrade-50	License expansion of MXview industrial network management software by 50 nodes (by IP address)

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