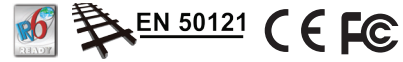


EDS-518E Series

14+4G-port Gigabit managed Ethernet switches



- > 4 Gigabit plus 14 Fast Ethernet ports for copper and fiber
- > Turbo Ring and Turbo Chain (recovery time < 20 ms @ 250 switches), 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, USB serial console, ABC-02-USB, MXconfig, and Windows Utility
- > EtherNet/IP, PROFINET, and Modbus/TCP protocols supported for device management and monitoring
- > Fiber Check™--comprehensive fiber status monitoring and warning on MST/MSC/SSC/SFP fiber ports



Introduction

The EDS-518E series is a standalone, compact-size 18-port managed Ethernet switch that provides 4 combo Gigabit ports with built-in RJ45 or SFP slots for Gigabit fiber optic communication. The 14 fast Ethernet ports with a variety of copper and fiber port combinations gives the EDS-518E series greater flexibility for designing your network and application. The Ethernet redundant Turbo Ring, Turbo Chain, RSTP/STP, and MSTP increase the system reliability and availability

of your network backbone. The EDS-518E also supports advanced management and security features.

In addition, the EDS-518E series is designed especially for harsh industrial environments with limited installation space and high protection level requirements, such as maritime, rail wayside, oil and gas, factory automation and process automation.

Features and Benefits

- Command Line Interface (CLI) for quickly configuring major managed functions
- IPv6 Ready logo awarded (IPv6 Logo Committee certified)
- Software-based IEEE 1588v2 PTP (Precision Time Protocol) for precise time synchronization of networks
- DHCP Option 82 for IP address assignment with different policies
- Support EtherNet/IP, PROFINET, and Modbus/TCP protocols for device management and monitoring
- Turbo Ring and Turbo Chain (recovery time < 20 ms @ 250 switches), RSTP/STP, and MSTP for network redundancy
- 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
- TACACS+, SNMPv3, 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
- Fiber Check™ provides a comprehensive fiber Digital Diagnostic Monitoring (DDM) function and event warning on MST/MSC/SSC/SFP fiber ports
- Bandwidth management prevents unpredictable network status
- Lock port function for blocking unauthorized access based on MAC address
- Port mirroring for online debugging
- Automatic warning by exception through e-mail, relay output
- ABC-02-USB (Automatic Backup Configurator) for system configuration backup/restore and firmware upgrade.

Specifications

Technology

Standards:

- IEEE 802.3 for 10BaseT
- IEEE 802.3u for 100BaseT(X) and 100BaseFX
- IEEE 802.3ab for 1000BaseT(X)
- IEEE 802.3z for 1000BaseX
- IEEE 802.3x for Flow Control
- IEEE 802.1D-2004 for Spanning Tree Protocol
- IEEE 802.1w for Rapid STP
- IEEE 802.1s for Multiple Spanning Tree Protocol
- 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, GMRP, GVRP, SNMPv1/v2c/v3, DHCP Server/Client, BootP, TFTP, SNMP, SMTP, RARP, RMON, HTTP, HTTPS, Telnet, Syslog, DHCP Option 66/67/82, SSH, SNMP Inform, EtherNet/IP, PROFINET, Modbus/TCP, LLDP, IEEE 1588v2 PTP, IPv6, NTP Server/Client

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
- MAC Table Size: 8 K
- Packet Buffer Size: 1 Mbit

Interface

- RJ45 Ports: 10/100BaseT(X) or 10/100/1000BaseT(X) auto negotiation speed
- Fiber Ports: 100BaseFX (SC/ST connector) and 100/1000BaseSFP slot
- Console Port: USB-serial console (Type B connector)
- Storage Port: USB storage port (Type A connector)
- LED Indicators: PWR1, PWR2, STATE, FAULT, 10/100M (TP port), 100M (fiber port), 100/1000M (Gigabit port), MSTR/HEAD, CPLR/TAIL
- Alarm Contact: 1 relay output with current carrying capacity of 1 A @ 24 VDC

Digital Inputs: 1 input 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

Button: Reset button

Optical Fiber

Table:

	100BaseFX	
	Multi-mode	Single-mode
Wavelength	1300 nm	1310 nm
Max. TX	-10 dBm	0 dBm
Min. TX	-20 dBm	-5 dBm
RX Sensitivity	-32 dBm	-34 dBm
Link Budget	12 dB	29 dB
Typical Distance	5 km ^a 4 km ^b	40 km ^c
Saturation	-6 dBm	-3 dBm

- a. 50/125 μm, 800 MHz*km fiber optic cable
- b. 62.5/125 μm, 500 MHz*km fiber optic cable
- c. 9/125 μm single-mode fiber optic cable

Power Requirements

Input Voltage: 12/24/48/-48 VDC, redundant dual inputs

Input Current:

- EDS-518E-4GTXSFP: 0.75 A @ 24 V
- EDS-518E-MM-ST/SC-4GTXSFP: 0.61 A @ 24 V
- EDS-518E-SS-SC-4GTXSFP: 0.61 A @ 24 V

Overload Current Protection: Present

Connection: 2 removable 4-contact terminal blocks

Reverse Polarity Protection: Present

Physical Characteristics

- Housing: Metal, IP30 protection
- Dimensions: 94 x 135 x 137 mm (3.7 x 5.31 x 5.39 in)
- Weight: 1,518 g
- Installation: DIN-rail mounting, wall mounting (with optional kit)

Environmental Limits

- 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:** -40 to 85°C (-40 to 185°F)
- Ambient Relative Humidity:** 5 to 95% (non-condensing)

Standards and Certifications

- Safety:** UL 508
- Hazardous Location:** UL/cUL Class 1 Division 2 Groups A/B/C/D, ATEX Zone 2 Ex nA nC IIC (Pending)
- EMI:** FCC Part 15 Subpart B Class A
- EMS:**
 - EN 61000-6-2 (Industrial), EN 61000-4-2 (ESD) Level 4, EN 61000-4-3 (RS) Level 3, EN 61000-4-4 (EFT) Level 4, EN 61000-4-5 (Surge) Level 4, EN 61000-4-6 (CS) Level 3, EN 61000-4-8

Traffic Control: NEMA TS2

Rail Traffic: EN 50121-4

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: 723,953 hrs

Database: Telcordia (Bellcore), GB

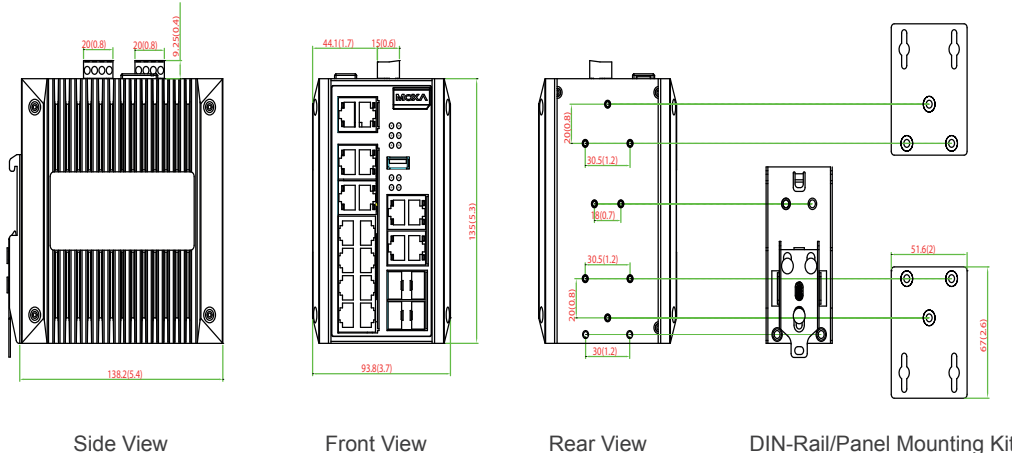
Warranty

Warranty Period: 5 years

Details: See www.moxa.com/warranty

Dimensions

Unit: mm (inch)



Ordering Information

Available Models		Total No. of Ports	Port Interface				
Standard Temperature (-10 to 60°C)	Wide Temperature (-40 to 75°C)		Gigabit Combo Port	Fast Ethernet			
			10/100/1000BaseT(X) or 100/1000BaseSFP*	10/100BaseT(X)	100BaseFX		
		Multi-mode, SC Connector			Multi-mode, ST Connector	Single-mode, SC Connector	
EDS-518E-4GTXSFP	EDS-518E-4GTXSFP-T	18	4	14	–	–	–
EDS-518E-MM-SC-4GTXSFP	EDS-518E-MM-SC-4GTXSFP-T	18	4	12	2	–	–
EDS-518E-MM-ST-4GTXSFP	EDS-518E-MM-ST-4GTXSFP-T	18	4	12	–	2	–
EDS-518E-SS-SC-4GTXSFP	EDS-518E-SS-SC-4GTXSFP-T	18	4	12	–	–	2

*The EDS-518E series supports 4 1000BaseSFP slots. See the SFP section for Gigabit Ethernet SFP module product information.

Optional Accessories (can be purchased separately)

MXview: Moxa industrial network management software with 50, 100, 250, 500, 1000, or 2000 nodes

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

ABC-02-USB-T: Configuration backup and restoration tool for managed Ethernet switches, -40 to 75°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-51-01: Wall mounting kit

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

Package Checklist

- EDS-518E switch
- USB-IF certified cable
- Protective caps for unused ports
- Documentation and software CD
- Hardware installation guide (printed)
- Warranty card