

# EDS-P506A-4PoE Series



## 6-port managed Ethernet switches with 4 IEEE 802.3af/at PoE+ ports



- > 4 IEEE 802.3af/at compliant PoE and Ethernet combo ports
- > Up to 30 watts per PoE port
- > 24/48 VDC wide range redundant power inputs
- > Advanced PoE management functions, including PD failure check and PoE scheduling
- > Turbo Ring and Turbo Chain (recovery time < 20 ms @ 250 switches), RSTP/STP, and MSTP for network redundancy
- > -40 to 75°C operating temperature range (T models)
- > Supports MXstudio for easy, visualized industrial network management



### Introduction

The EDS-P506A-4PoE series managed redundant Ethernet switches come standard with 4 10/100BaseT(X) 802.3at (PoE+) and 802.3af (PoE) compliant Ethernet ports and 2 10/100BaseT(X) or 2 10/100BaseFX Ethernet ports. The EDS-P506A-4PoE switches provide up to 30 watts of power per PoE port, and allow power to be supplied

to connected high-power devices when AC power is not readily available or is cost-prohibitive to provide locally. The EDS-P506A-4PoE series is designed especially for security automation applications such as IP surveillance, and gate of entry systems, which can benefit from a scalable backbone construction and Power-over-Ethernet support.

### Features and Benefits

- Advanced PoE management function (PoE port setting, PD failure check, and PoE scheduling)
- 24/48 VDC wide range redundant power inputs
- IPv6 Ready logo awarded (IPv6 Logo Committee certified)
- Command Line Interface (CLI) for quickly configuring major managed functions
- Software-based IEEE 1588 PTPv2 (Precision Time Protocol) for precise time synchronization of networks
- Support EtherNet/IP 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

### Specifications

#### Technology

##### Standards:

IEEE 802.3af/at for Power-over-Ethernet  
 IEEE 802.3 for 10BaseT  
 IEEE 802.3u for 100BaseT(X) and 100BaseFX  
 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

#### Software Features

**Management:** IPv4/IPv6, SNMP v1/v2c/v3, LLDP, Port Mirror, DDM, RMON, DHCP Server/Client, DHCP Option 66/67/82, BootP, TFTP, SMTP, RARP, Telnet, Syslog, SNMP Inform, Flow Control, Back Pressure Flow Control

**Filter:** 802.1Q VLAN, Port-Based VLAN, GVRP, IGMP v1/v2, GMRP

**Redundancy Protocols:** STP, RSTP, MSTP, Turbo Ring v1/v2, Turbo Chain, Link Aggregation

**Security:** RADIUS, TACACS+, SSL, SSH, Port Lock

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

**Industrial Protocols:** EtherNet/IP, Modbus/TCP

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

#### Switch Properties

**Priority Queues:** 4

**Max. Number of 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) auto negotiation speed, Full/Half duplex mode, and auto MDI/MDI-X connection

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

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

**PoE Pinout:** V+, V+, V-, V- for pin 1, 2, 3, 6 (Endspan, MDI Alternative A)

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

**Alarm Contact:** 2 relay outputs with current carrying capacity of 1 A @ 24 VDC

**Digital Inputs:** 2 inputs with the same ground, but electrically isolated from the electronics.

• +13 to +30 V for state "1"

• -30 to +3 V for state "0"

• Max. input current: 8 mA

## Optical Fiber

		100BaseFX		
		Multi-Mode		Single-Mode
Fiber Cable Type		OM1	50/125 μm	G.652
			800 MHz*km	
Typical Distance		4 km	5 km	40 km
Wave-length	Typical (nm)	1300		1310
	TX Range (nm)	1260 to 1360	1280 to 1340	
	RX Range (nm)	1100 to 1600	1100 to 1600	
Optical Power	TX Range (dBm)	-10 to -20	0 to -5	
	RX Range (dBm)	-3 to -32	-3 to -34	
	Link Budget (dB)	12	29	
	Dispersion Penalty (dB)	3	1	

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) > dispersion penalty (dB) + total link loss (dB).

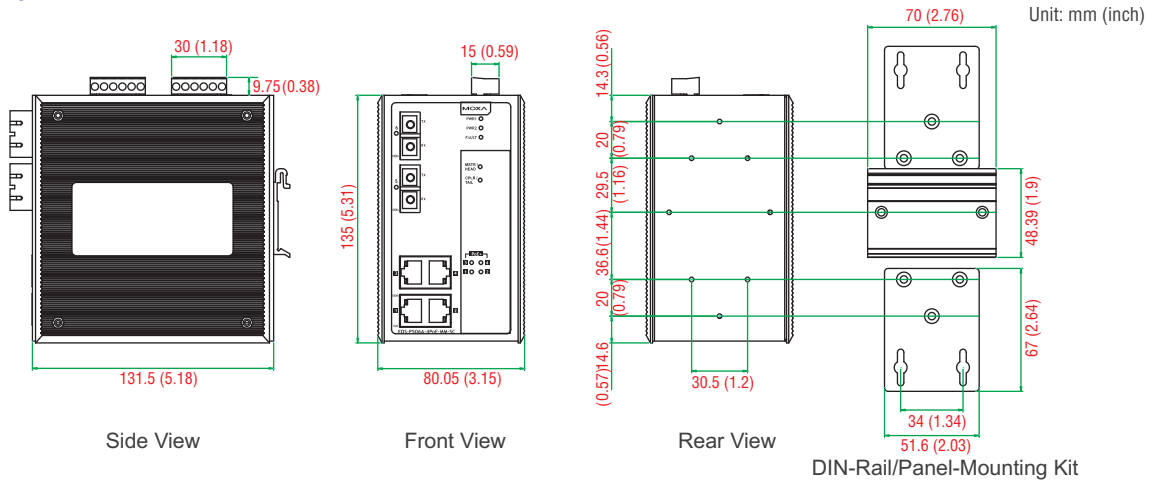
## Power Requirements

**Input Voltage:** 24/48 VDC, redundant dual inputs  
**Operating Voltage:** 22 to 57 VDC  
**Input Current:** 5.72 A @ 24 VDC  
**Connection:** 2 removable 6-contact terminal blocks  
**Reverse Polarity Protection:** Present  
**Power Consumption:** Max. 17.28 W full loading without PDs' consumption  
**Power Budget:** Max. 120 W for total PDs' consumption  
 Max. 30 W for each PoE port

## Physical Characteristics

**Housing:** Metal  
**IP Rating:** IP30 protection

## Dimensions



**Dimensions:** 80 x 135 x 131.5 mm (3.15 x 5.31 x 5.18 in)  
**Weight:** 1270 g (2.80 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:** -40 to 85°C (-40 to 185°F)  
**Ambient Relative Humidity:** 5 to 95% (non-condensing)

**Standards and Certifications**  
**Safety:** UL 508  
**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: 20 V/m  
 IEC 61000-4-4 EFT: Power: 2 kV; Signal: 1 kV  
 IEC 61000-4-5 Surge: Power: 2 kV; Signal: 1 kV  
 IEC 61000-4-6 CS: Signal: 10 V  
 IEC 61000-4-8  
**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:** 433,000 hrs  
**Standard:** Telcordia (Bellcore), GB

**Warranty**  
**Warranty Period:** 5 years  
**Details:** See www.moxa.com/warranty

## Ordering Information

Available Models		Port Interface				
Standard Temperature (0 to 60°C)	Wide Temperature (-40 to 75°C)	PoE+, 10/100BaseT(X)	10/100BaseT(X)	100BaseFX		
				Multi-Mode SC Connector	Multi-Mode ST Connector	Single-Mode SC Connector
EDS-P506A-4PoE	EDS-P506A-4PoE-T	4	2	-	-	-
EDS-P506A-4PoE-MM-SC	EDS-P506A-4PoE-MM-SC-T	4	-	2	-	-
EDS-P506A-4PoE-MM-ST	EDS-P506A-4PoE-MM-ST-T	4	-	-	2	-
EDS-P506A-4PoE-SS-SC	EDS-P506A-4PoE-SS-SC-T	4	-	-	-	2

## 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-01:** Configuration backup and restoration tool for managed Ethernet switches, 0 to 60°C operating temperature  
**DR-75-24/120-24:** 75/120 W DIN-rail 24 VDC power supplies  
**DR-75-48/120-48:** 75/120 W DIN-rail 48 VDC power supplies  
**DRP-240-48:** 240 W DIN-rail 48 VDC power supplies  
**WK-51-01:** Wall-mounting kit, 2 plates with 6 screws  
**RK-4U:** 4U-high 19-inch rack-mounting kit

## Package Checklist

- EDS-P506A-4PoE switch
- Serial Cable: CN20070
- Protective caps for unused ports
- Document and software CD
- Hardware installation guide (printed)
- Warranty card