

# EDS-P506A-4PoE Series

▶ Award-winning Product



## 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).

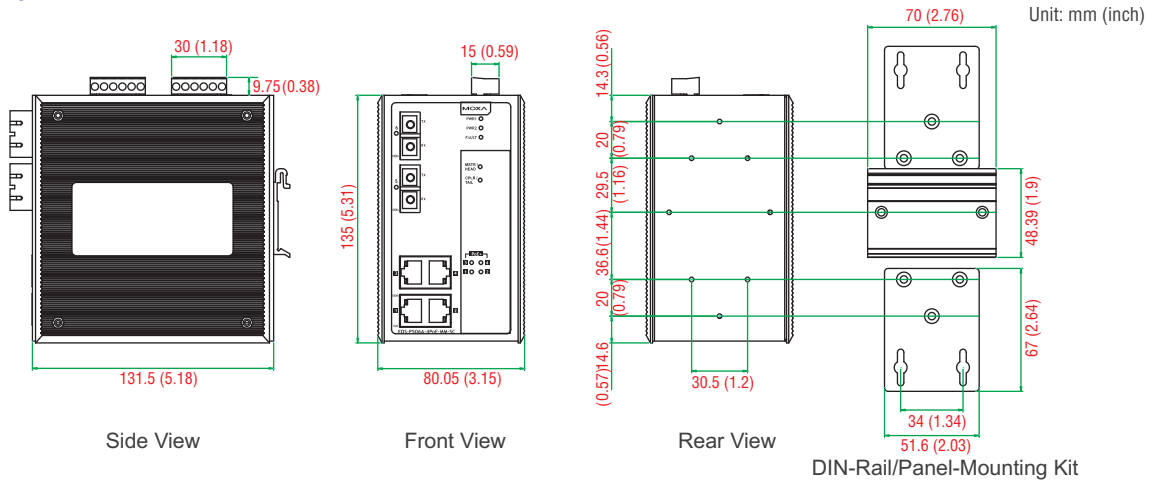
## Power Requirements

**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				
		PoE+, 10/100BaseT(X)	10/100BaseT(X)	100BaseFX		
Standard Temperature (0 to 60°C)	Wide Temperature (-40 to 75°C)			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