

# EDS-P506A-4PoE Series

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



- > 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
- > -40 to 75°C operation temperature range (T models)



### 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 (such as high-end PTZ camera and WiMAX devices) when AC power is not readily available or is cost-prohibitive to provide locally. The EDS-P506A-4PoE series switches are

highly versatile, and their fiber port can transmit data up to 80 km from the device to the control center with high EMI immunity. The Ethernet switches support advanced management and security features. The EDS-P506A-4PoE series 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)
- IEEE 1588 PTP (Precision Time Protocol) for precise time synchronization of networks
- DHCP Option 82 for IP address assignment with different policies
- Modbus/TCP industrial Ethernet protocol supported
- Turbo Ring and Turbo Chain (recovery time < 20 ms at full load), and RSTP/STP (IEEE 802.1w/D)
- 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
- SNMPv3, IEEE 802.1X, HTTPS, and SSH to enhance network security
- Lock port function for blocking unauthorized access based on MAC address
- SNMPv1/v2c/v3 for different levels of network management
- RMON for efficient network monitoring and proactive capability
- Bandwidth management to prevent unpredictable network status
- Port mirroring for online debugging
- Automatic warning by exception through e-mail, relay output

### Specifications

#### Technology

##### Standards:

- IEEE 802.3at/af 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 for Spanning Tree Protocol
- IEEE 802.1w for Rapid STP
- 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, DHCP Option 66/67/82, BootP, TFTP, SNMP, SMTP, RARP, RMON, HTTP, HTTPS, Telnet, SSH, Syslog, Modbus/TCP, SNMP Inform, LLDP, IEEE 1588 PTP, IPv6

**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

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

**RJ45 Ports:** 10/100BaseT(X) auto negotiation speed, Full/Half duplex mode, and auto MDI/MDI-X connection

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

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

**LED Indicators:** PWR1, PWR2, FAULT, 10/100M, MSTR/HEAD, CPLR/TAIL, PoE

**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 +30V for state “1”
- -30 to +3V for state “0”
- Max. input current: 8 mA

**Optical Fiber**

	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 <sup>a</sup> 4 km <sup>b</sup>	40 km <sup>c</sup>
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:** 24/48 VDC

**Input Current:** Max. 7.8 A @ 24 VDC (supports up to 4 ports at 30 watts per PoE port)

**Overload Current Protection:** Present

**Connection:** 2 removable 6-contact terminal blocks

**Reverse Polarity Protection:** Present

**Physical Characteristics**

**Housing:** Metal, IP30 protection

**Dimensions:** 80 x 135 x 131.5 mm (3.15 x 5.31 x 5.18 in)

**Weight:** 1270 g

**Installation:** DIN-Rail mounting, wall mounting (with optional kit)

**Environmental Limits**

**Operating Temperature:**

Standard Models: 0 to 60°C (32 to 140°F)

Wide Operating 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)

**Regulatory Approvals**

**Safety:** UL508 (Pending)

**EMI:** FCC Part 15, CISPR (EN55022) class A

**EMS:**

EN61000-4-2 (ESD), level 3; EN61000-4-3 (RS), level 3;

EN61000-4-4 (EFT), level 3; EN61000-4-5 (Surge), level 3;

EN61000-4-6 (CS), level 3; EN61000-4-8

**Shock:** IEC 60068-2-27

**Freefall:** IEC 60068-2-32

**Vibration:** IEC 60068-2-6

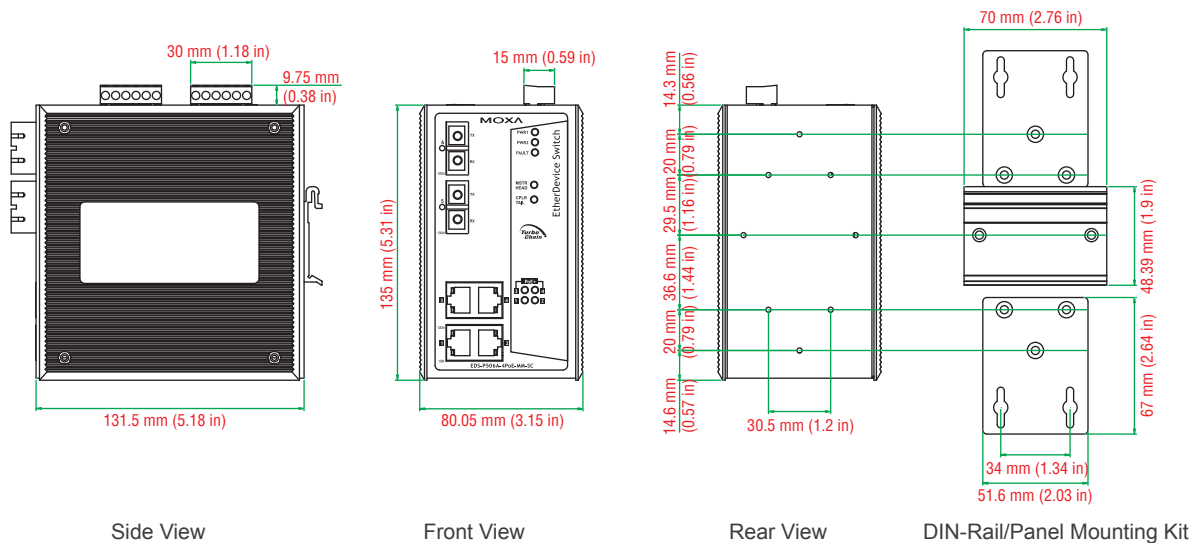
*Note: Please check Moxa's website for the most up-to-date certification status.*

**Warranty**

**Warranty Period:** 5 years

**Details:** See [www.moxa.com/warranty](http://www.moxa.com/warranty)

**Dimensions**



**: 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)

- SPL-24:** PoE splitter, maximum output of 12.95 W at 24 VDC, 0 to 60°C operating temperature
- SPL-24-T:** PoE splitter, maximum output of 12.95 W at 24 VDC, -40 to 75°C operating temperature
- INJ-24:** PoE Injector, maximum output of 25.5 W at 24/48 VDC, 0 to 60°C operating temperature
- INJ-24-T:** PoE Injector, maximum output of 25.5 W at 24/48 VDC, -40 to 75°C operating temperature
- MXview:** Moxa industrial network management software with 50, 100, 250, or 500 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-75-48/120-48:** 75/120 W DIN-Rail 48 VDC power supplies
- DR-75-24/120-24:** 75/120 W DIN-Rail 24 VDC power supplies
- WK-51:** Wall mounting kit
- RK-4U:** 4U-high 19" rack mounting kit