EDS-P506A-4PoE Series

Award-winning Product
TAIWAN EXCELLENCE 2011

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

PoE with High Power

- 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

Turbo Ring Self-Healing Ethernet
Beyond Redundant Ring Turbo Chain
IPv6 READY
c UL us LISTED
EN 50121
CE FC

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 800 MHz*km	G.652
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: 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)

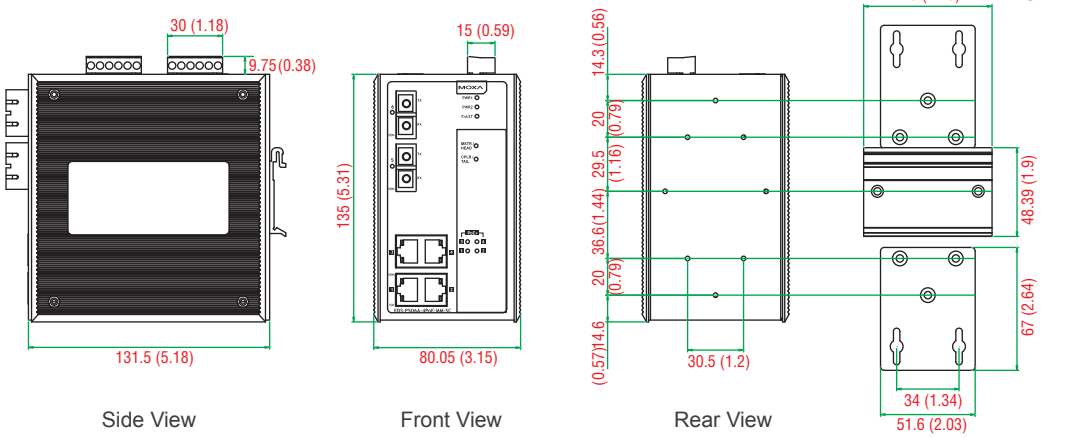
Time: 433,000 hrs
Standard: Telcordia (Bellcore), GB

Warranty

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

Dimensions

Unit: mm (inch)



Side View | Front View | Rear View | DIN-Rail/Panel-Mounting Kit

Ordering Information

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