EDS-P510 Series

7+3G-port Gigabit managed Ethernet switches with 4 PoE ports

PoE
Power over Ethernet

> 4 IEEE 802.3af-compliant PoE and Ethernet combo ports
> Provides up to 15.4 watts at 48 VDC per PoE port
> Intelligent power consumption detection, PD failure check, and PoE scheduling function
> 3 combo (10/100/1000BaseT(X) or 100/1000BaseSFP slot) Gigabit ports; 2 ports for redundant ring and 1 port for uplink
> 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, Telnet/serial console, windows utility, and ABC-01

Turbo Ring — Beyond Redundant Ring — Turbo Chain — Self-Healing Ethernet

IndustrialIT™ ▶▶enabled · IPv6 READY · c(UL)us LISTED · DNV · (GL) · Lloyd's Register LIFE MATTERS · ABS APPROVED PRODUCT · ClassNK APPROVED · CE · FC

⦂ Introduction

The EDS-P510 series Gigabit managed redundant Ethernet switches come standard with 4 10/100BaseT(X) 802.3af (PoE) compliant Ethernet ports and 3 combo Gigabit Ethernet ports. The EDS-P510 switches provide up to 15.4 watts of power per PoE port, and allow power to be supplied to connected devices (such as surveillance cameras, wireless access points, and IP phones) when AC power is not readily available or is cost-prohibitive to provide locally. The

EDS-P510 switches are highly versatile, and their SFP 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-P510 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)
- Command Line Interface (CLI) for quickly configuring major managed functions
- IPv6 Ready logo awarded (IPv6 Logo Committee certified)
- IEEE 1588 PTP V2 (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+, IEEE 802.1X, SNMPv3, 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

*Available in Q4, 2013

⦂ Specifications

Technology
Standards:
IEEE 802.3af for Power-over-Ethernet
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, DHCP Option 66/67/82, BootP, TFTP, SNTP, SMTP, RARP, RMON, HTTP, HTTPS, Telnet, SSH, Syslog, EtherNet/IP, PROFINET*, Modbus/TCP, SNMP Inform, LLDP, IEEE 1588 PTP V2, 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
*Available in Q4, 2013

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: 100/1000BaseSFP slot
RJ45 Ports: 10/100BaseT(X) or 10/100/1000BaseT(X) auto negotiation speed
PoE Pinout: V+, V+, V-, V- for pin 1, 2, 3, 6 (Endspan, MDI Alternative A)
Console Port: RS-232 (RJ45 connector)
DIP Switches: Turbo Ring, Master, Coupler, Reserve
LED Indicators: PWR1, PWR2, FAULT, 10/100/1000, 10/100, MSTR/HEAD, CPLR/TAIL, PoE
Alarm Contact: 2 relay outputs with current carrying capacity of 0.5 A @ 48 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

Power Requirements

Input Voltage: 48 (46 to 50 V) VDC, redundant dual inputs
Input Current: Max. 1.62 A @ 48 VDC (supports up to 4 ports at 15.4 W 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: 80.2 x 135 x 105 mm (3.16 x 5.31 x 4.13 in)
Weight: 1170 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)

Standards and Certifications

Safety: UL 508
EMI: FCC Part 15 Subpart B Class A, EN 55022 Class A
EMS:
EN 61000-4-2 (ESD) Level 3, EN 61000-4-3 (RS) Level 3,
EN 61000-4-4 (EFT) Level 3, EN 61000-4-5 (Surge) Level 3,
EN 61000-4-6 (CS) Level 3, EN 61000-4-8
Marine: DNV, GL, LR, ABS, NK
Shock: IEC 60068-2-27
Freefall: IEC 60068-2-32
Vibration: IEC 60068-2-6
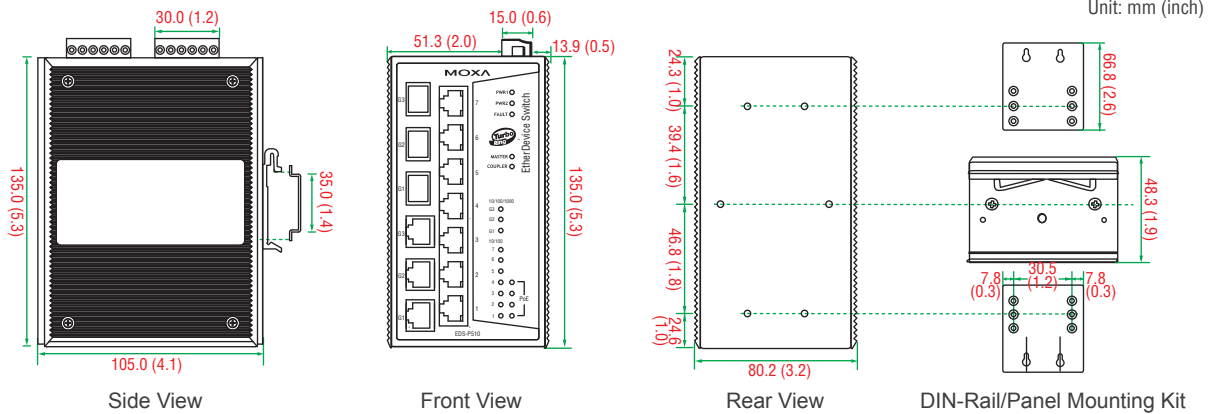Note: Please check Moxa's website for the most up-to-date certification status.

MTBF (mean time between failures)

Time: 205,384 hrs
Database: 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		
		Gigabit Ethernet	Fast Ethernet	
Standard Temperature (0 to 60°C)	Wide Temperature (-40 to 75°C)	Combo Port, 10/100/1000BaseT(X) or 100/1000BaseSFP*	PoE, 10/100BaseT(X)	10/100BaseT(X)
EDS-P510	EDS-P510-T	3	4	3

*The EDS-P510 series supports 3 100/1000BaseSFP slots. See page pages 3 and 5 for SFP-1G/1FE series Gigabit/Fast Ethernet SFP module product information.

Optional Accessories (can be purchased separately)

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
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
WK-46: Wall mounting kit
RK-4U: 4U-high 19" rack mounting kit

Package Checklist

• EDS-P510 switch
• RJ45 to DB9 console port cable
• Protective caps for unused ports
• Documentation and software CD
• Hardware installation guide (printed)
• Warranty card