

EDS-405A/408A Series

5 and 8-port entry-level managed Ethernet switches



- ▶ Plug-n-Play Turbo Ring and Turbo Chain with fast recovery time (under 20 ms)
- ▶ IGMP Snooping QoS, IEEE 802.1Q VLAN, SNMPv1/v2c/v3, RMON supported
- ▶ Automatic warning by exception through e-mail, relay output
- ▶ User-friendly web-based configuration and management
- ▶ ABC-01 (Automatic Backup Configurator) for system configuration backup (optional accessory)



Introduction

The EDS-405A/408A are entry-level 5 and 8-port managed Ethernet switches designed especially for industrial applications. The switches support a variety of useful management functions, such as Turbo Ring, Turbo Chain, ring coupling, port-based VLAN, QoS, RMON,

bandwidth management, port mirroring, and warning by email or relay. The ready-to-use Turbo Ring can be set up easily using the web-based management interface, or with the DIP switches located on the top panel of the EDS-405A/408A switches.

Features and Benefits

- IPv6 Ready logo awarded (IPv6 Logo Committee certified)
- 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 and TOS/DiffServ) to increase determinism
- RMON for efficient network monitoring and proactive capability
- SNMPv1/v2c/v3 for different levels of network management security
- Bandwidth management to prevent unpredictable network status
- Port mirroring for online debugging

Specifications

Technology

Standards:

- 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 802.1p for Class of Service
- IEEE 802.1Q for VLAN Tagging

Protocols: IGMPv1/v2, GMRP, GVRP, SNMPv1/v2c/v3, DHCP Server/Client, TFTP, SNTP, SMTP, RARP, RMON, HTTP, Telnet, Syslog, DHCP Option 66/67/82, BootP, LLDP, Modbus/TCP, IPv6

MIB: MIB-II, Ethernet-Like MIB, P-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

MAC Table Size: 2 K (EDS-405A), 8 K (EDS-408A)

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, MSTR/HEAD, CPLR/TAIL, 10/100M

Alarm Contact: 1 relay output with current carrying capacity of 1 A @ 24 VDC

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 ^a 4 km ^b	40 km ^c
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 VDC (12 to 45 VDC), redundant dual inputs

Input Current:

EDS-405A: 0.24 A @ 24 V

EDS-405A-MM/SS: 0.32 A @ 24 V

EDS-408A: 0.26 A @ 24 V

EDS-408A-MM/SS: 0.35 A @ 24 V

EDS-408A-3M/3S/2M1S/1M2S: 0.32 A @ 24 V

Overload Current Protection: Present

Connection: 1 removable 6-contact terminal block

Reverse Polarity Protection: Present

Physical Characteristics

Housing: Metal, IP30 protection

Dimensions: 53.6 x 135 x 105 mm (2.11 x 5.31 x 4.13 in)

Weight:

EDS-405A, EDS-405A-MM, EDS-405A-SS: 650 g

EDS-408A, EDS-408A-MM, EDS-408A-SS: 650 g

EDS-408A-3M/3S/2M1S/1M2S: 890 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 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, UL60950-1, CSA C22.2 No. 60950-1, EN60950-1

Hazardous Location: UL/cUL Class I, Division 2, Groups A, B, C, and D (EDS-408A-3M/3S/2M1S/1M2S Pending); ATEX Zone 2, Ex nC IIC (EDS-408A-3M/3S/2M1S/1M2S 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

Maritime:

EDS-405A, EDS-405A-MM, EDS-405A-SS: DNV, GL

EDS-408A, EDS-408A-MM, EDS-408A-SS: DNV, GL

EDS-408A-3M/3S/2M1S/1M2S: DNV, GL, ABS, LR, NK

Rail Traffic: EN50121-4 (EDS-408A series only)

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:

EDS-405A Series: 392,000 hrs

EDS-408A Series: 363,000 hrs

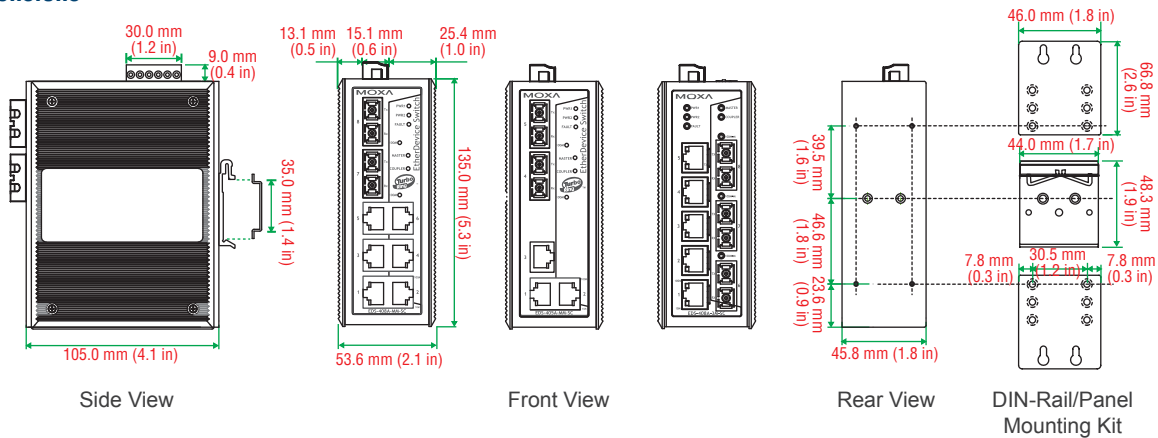
Database: Telcordia (Bellcore), GB

Warranty

Warranty Period: 5 years

Details: See www.moxa.com/warranty

Dimensions



Ordering Information

Available Models		Port Interface			
Standard Temperature (0 to 60°C)	Wide Temperature (-40 to 75°C)	10/100BaseT(X)	100BaseFX		
			Multi-mode, SC Connector	Multi-mode, ST Connector	Single-mode, SC Connector
EDS-405A/408A	EDS-405A/408A-T	5/8	–	–	–
EDS-405A/408A-MM-SC	EDS-405A/408A-MM-SC-T	3/6	2	–	–
EDS-405A/408A-MM-ST	EDS-405A/408A-MM-ST-T	3/6	–	2	–
EDS-408A/405A-SS-SC	EDS-408A/405A-SS-SC-T	3/6	–	–	2
EDS-408A-3M-SC	EDS-408A-3M-SC-T	5	3	–	–
EDS-408A-3M-ST	EDS-408A-3M-ST-T	5	–	3	–
EDS-408A-3S-SC	EDS-408A-3S-SC-T	5	–	–	3
EDS-408A-2M1S-SC	EDS-408A-2M1S-SC-T	5	2	–	1
EDS-408A-1M2S-SC	EDS-408A-1M2S-SC-T	5	1	–	2

Optional Accessories (can be purchased separately)

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-4524/75-24/120-24: 45/75/120 W DIN-Rail 24 VDC power supplies

MDR-40-24/60-24: 40/60 W DIN-Rail 24 VDC power supplies, -20 to 70°C operating temperature

WK-46: Wall mounting kit

RK-4U: 4U-high 19" rack mounting kit