EDS-408A-3S-SC-48 Series

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-408A-3S-SC-48 is an 8-port managed Ethernet switch designed especially for industrial applications. The switch supports 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-408A-3S-SC-48.

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-2004 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, NTP Server/Client*
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: 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, 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/±48 VDC (-60 to -19 VDC or 19 to 60 VDC), redundant dual inputs (mixing power polarity systems is prohibited)
Input Current: 0.32 A @ 24 V
Inrush Current:
63 A @ 24 V
82 A @ 48 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: 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)

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
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.
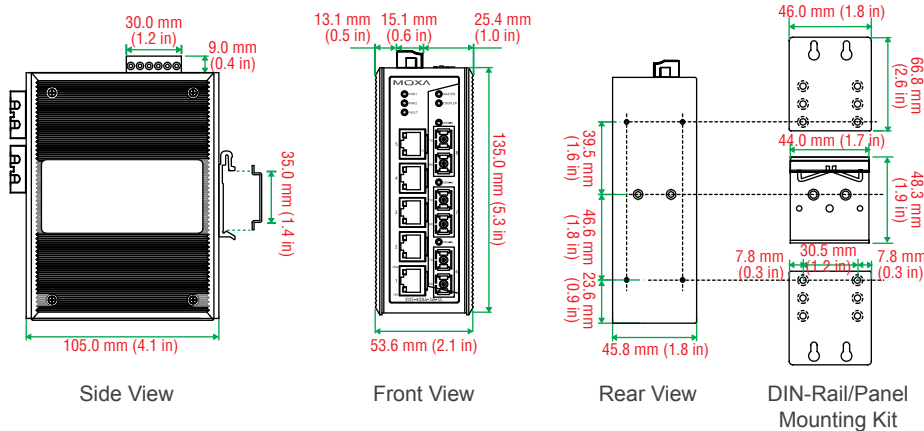
MTBF (mean time between failures)
Time: 363,000 hrs
Database: Telcordia (Bellcore), GB

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

Dimensions

Side View — 30.0 mm (1.2 in), 9.0 mm (0.4 in), 35.0 mm (1.4 in), 105.0 mm (4.1 in)

Front View — 13.1 mm (0.5 in), 15.1 mm (0.6 in), 25.4 mm (1.0 in), 135.0 mm (5.3 in), 53.6 mm (2.1 in)

Rear View — 39.5 mm (1.6 in), 46.6 mm (1.8 in), 23.6 mm (0.9 in), 45.8 mm (1.8 in)

DIN-Rail/Panel Mounting Kit — 46.0 mm (1.8 in), 66.8 mm (2.6 in), 44.0 mm (1.7 in), 48.3 mm (1.9 in), 7.8 mm (0.3 in), 30.5 mm (1.2 in), 7.8 mm (0.3 in)

: Ordering Information

Available Models		10/100BaseT(X)	Port Interface		
			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-408A-3S-SC-48	EDS-408A-3S-SC-48-T	5	–	–	3

Optional Accessories (can be purchased separately)
MXview: Moxa industrial network management software with 50, 100, 250, 500, or 1000 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