EDS-G500E Series

8G/12G/16G-port full Gigabit managed Ethernet switches

> Up to 12 10/100/1000BaseT(X) ports and 4 100/1000BaseSFP ports
> Turbo Ring and Turbo Chain (recovery time < 50 ms @ 250 switches), RSTP/STP, and MSTP for network redundancy
> RADIUS, TACACS+, SNMPv3, IEEE 802.1X, HTTPS, and SSH to enhance network security
> Easy network management by web browser, CLI, USB serial console, ABC-02-USB, MXconfig, and Windows utility
> EtherNet/IP, PROFINET, and Modbus/TCP protocols supported for device management and monitoring

: Introduction

The EDS-G500E series is equipped with 8/12/16 Gigabit Ethernet ports and up to 4 fiber optic ports, making it ideal for upgrading an existing network to Gigabit speed or building a new full Gigabit backbone. Gigabit transmission increases bandwidth for higher performance and transfers large amounts of triple-play services across a network quickly. Redundant Ethernet Turbo Ring, Turbo Chain, RSTP/STP, and MSTP increase system reliability and the availability of your network backbone. The EDS-G500E series is designed especially for communication demanding applications, such as video and process monitoring, ITS, and DCS systems, all of which can benefit from a scalable backbone construction.

Features and Benefits

- 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 < 50 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
- SNMPv1/v2c/v3 for different levels of network management
- RMON for efficient network monitoring and proactive capability
- Bandwidth management prevents unpredictable network status
- Lock port function for blocking unauthorized access based on MAC address
- Port mirroring for online debugging
- Automatic warning by exception through e-mail, relay output
- ABC-02-USB (Automatic Backup Configurator) for system configuration backup/restore and firmware upgrade.

: Specifications

Technology
Standards:
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/v3, 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

Switch Properties
Priority Queues: 4
Max. Number of Available VLANs: 256
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: 10/100/1000BaseT(X) auto negotiation speed
USB Ports: USB console port (Type B connector)
USB storage port (Type A connector)
DIP Switches: Turbo Ring, Master, Coupler, Reserve
LED Indicators: PWR1, PWR2, FAULT, STATE, 10/100/1000M, MSTR/HEAD, CPLR/TAIL

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

Digital Inputs: 1 input 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

Button: Reset button

Power Requirements
Input Voltage: 12/24/48/-48 VDC, redundant dual inputs
Input Current: EDS-G516E: 24 VDC / 0.6 A
EDS-G512E: 24 VDC / 0.52 A
EDS-G508E: 24 VDC / 0.43 A
Overload Current Protection: Present
Connection: 2 removable 2-contact terminal blocks
Reverse Polarity Protection: Present

Physical Characteristics
Housing: Metal, IP30 protection
Dimensions: 79.2 x 135 x 137 mm (3.1 x 5.3 x 5.4 in)
Weight: 1440 g
Installation: DIN rail mounting, wall mounting (with optional kit)

Environmental Limits
Operating Temperature:
Standard Models: -10 to 60°C (14 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 61000-6-4 (Industrial)
EMS:
EN 61000-6-2 (Industrial), EN 61000-4-2 (ESD) Level 4, EN 61000-4-3 (RS) Level 3,
EN 61000-4-4 (EFT) Level 4, EN 61000-4-5 (Surge) Level 4, EN 61000-4-6 (CS) Level 3, EN 61000-4-8, IEEE 1613
Traffic Control: NEMA TS2
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: EDS-G508E Series: 808,970 hrs
EDS-G512E-4GSFP Series: 816,823 hrs
EDS-G516E-4GSFP Series: 805,491 hrs
Database: Telcordia (Bellcore), GB

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

Dimensions

Unit: mm (inch)

EDS-G508E   EDS-G512E-4GSFP   EDS-G516E-4GSFP

Front Views   Side View   Rear View   DIN-Rail/Panel Mount Kit

Ordering Information

Available Models		Gigabit Ethernet Port Interface	
Standard Temperature (-10 to 60˚C)	Wide Temperature (-40 to 75˚C)	10/100/1000BaseT(X)	100/1000BaseSFP*
EDS-G508E	EDS-G508E-T	8	–
EDS-G512E-4GSFP	EDS-G512E-4GSFP-T	8	4
EDS-G516E-4GSFP	EDS-G516E-4GSFP-T	12	4

*Note: The EDS-G500E series supports up to 4 100/1000BaseSFP slots. See page 3 and 4 for SFP-1G/1G copper/1FE series Gigabit/Fast Ethernet SFP module product information.

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-02-USB-T: Configuration backup and restoration tool for managed Ethernet switches, -40 to 75°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-51-01: Wall mounting kit
RK-4U: 4U-high 19" rack mounting kit

Package Checklist
- EDS-G500E switch
- USB-IF certified cable
- Protective caps for unused ports
- Documentation and software CD
- Warranty card
- Hardware installation guide (printed)