

# EDS-619 Series

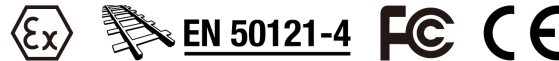
## 16+3G-port compact modular managed Ethernet switches



### Features and Benefits

- Up to 19 optical fiber connections in a compact switch
- Modular design with 4-port copper/fiber combinations
- Hot-swappable media modules for continuous operation
- Turbo Ring and Turbo Chain (recovery time < 20 ms @ 250 switches)<sup>1</sup>, and STP/RSTP/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
- Supports MXstudio for easy, visualized industrial network management

### Certifications



## Introduction

The versatile modular design of the compact EDS-619 Series allows users to combine fiber and copper modules to create switch solutions suitable for any automation network. The EDS-619's modular design lets you install up to 3 Gigabit Ethernet ports and 16 Fast Ethernet ports, and the advanced Turbo Ring and Turbo Chain (recovery time < 20 ms) technology, RSTP/STP, and MSTP help increase the reliability and availability of your industrial Ethernet network.

Models with an extended operating temperature range of -40 to 75°C are also available. The EDS-619 Series supports several reliable and intelligent functions, including EtherNet/IP, Modbus TCP, LLDP, DHCP Option 82, SNMP Inform, QoS, IGMP snooping, VLAN, TACACS+, IEEE 802.1X, HTTPS, SSH, SNMPv3, and more, making the Ethernet switches suitable for any harsh industrial environment.

### Additional Features and Benefits

- Command line interface (CLI) for quickly configuring major managed functions
- SNMP Inform for ensuring reliable event management
- LLDP for automated topology discovery
- DHCP Option 82 for IP address assignment with different policies
- Supports EtherNet/IP and Modbus TCP protocols for device management and monitoring
- Compatible with PROFINET protocol for transparent data transmission
- Port mirroring for online debugging
- 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
- SNMPv1/v2c/v3 for different levels of network management
- RMON for proactive and efficient network monitoring
- Bandwidth management to prevent unpredictable network status
- Lock port function for blocking unauthorized access based on MAC address
- Automatic warning by exception through email and relay output

## Specifications

### Input/Output Interface

|                        |   |
|------------------------|---|
| Digital Inputs         | +13 to +30 V for state 1<br>-30 to +3 V for state 0<br>Max. input current: 8 mA |
| Alarm Contact Channels | Relay output with current carrying capacity of 1 A @ 24 VDC                     |

1. If the port link speed is 1 Gigabit or higher, the recovery time is < 50 ms.

## Ethernet Interface

|           |   |
|-----------|---|
| Module    | 4 slots for any combination of 4-port interface modules, 10/100BaseT(X) or 100BaseFX  |
| Standards | IEEE 802.1D-2004 for Spanning Tree Protocol<br>IEEE 802.1p for Class of Service<br>IEEE 802.1Q for VLAN Tagging<br>IEEE 802.1s for Multiple Spanning Tree Protocol<br>IEEE 802.1w for Rapid Spanning Tree Protocol<br>IEEE 802.1X for authentication<br>IEEE 802.3 for 10BaseT<br>IEEE 802.3ab for 1000BaseT(X)<br>IEEE 802.3ad for Port Trunk with LACP<br>IEEE 802.3u for 100BaseT(X) and 100BaseFX<br>IEEE 802.3x for flow control |

## Ethernet Software Features

|                      |  |
|----------------------|--|
| Filter               | GMRP<br>GVRP<br>IGMP v1/v2<br>Port-based VLAN  |
| Industrial Protocols | EtherNet/IP<br>Modbus TCP  |
| Management           | Back Pressure Flow Control<br>BOOTP<br>DDM<br>DHCP Option 66/67/82<br>DHCP Server/Client<br>Flow control<br>IPv4/IPv6<br>LLDP<br>Port Mirror<br>RARP<br>RMON<br>SMTP<br>SNMP Inform<br>SNMPv1/v2c/v3<br>Syslog<br>Telnet<br>TFTP |
| MIB                  | Bridge MIB<br>Ethernet-like MIB<br>MIB-II<br>P-BRIDGE MIB<br>Q-BRIDGE MIB<br>RMON MIB Groups 1, 2, 3, 9<br>RSTP MIB  |
| Redundancy Protocols | Link Aggregation<br>MSTP<br>RSTP<br>STP<br>Turbo Chain<br>Turbo Ring v1/v2   |
| Security             | Broadcast storm protection<br>HTTPS/SSL<br>Port Lock<br>RADIUS<br>SSH<br>TACACS+   |
| Time Management      | NTP Server/Client<br>SNTP  |

## Switch Properties

|                    |               |
|--------------------|---------------|
| IGMP Groups        | 256           |
| MAC Table Size     | 8 K           |
| Max. No. of VLANs  | 64            |
| Packet Buffer Size | 1 Mbits       |
| Priority Queues    | 4             |
| VLAN ID Range      | VID 1 to 4094 |

## LED Interface

|                |   |
|----------------|---|
| LED Indicators | PWR1, PWR2, FAULT, MSTR/HEAD, CPLR/TAIL, G1/G2/G3 |
|----------------|---|

## Serial Interface

|              |   |
|--------------|---|
| Console Port | RS-232 (TxD, RxD, GND), 10-pin RJ45 (115200, n, 8, 1) |
|--------------|---|

## DIP Switch Configuration

|                    |                                      |
|--------------------|--------------------------------------|
| Ethernet Interface | Turbo Ring, Master, Coupler, Reserve |
|--------------------|--------------------------------------|

## Power Parameters

|                             |   |
|-----------------------------|---|
| Connection                  | 1 removable 6-contact terminal block(s)   |
| Input Voltage               | 12/24/48 VDC<br>Redundant dual inputs   |
| Input Current               | 2.6 A @ 12 VDC<br>Note: These are the input current ratings for the device with the maximum number of modules installed.      |
| Power Consumption (Max.)    | 31.2 W @ 12 VDC<br>Note: These are the power consumption ratings for the device with the maximum number of modules installed. |
| Overload Current Protection | Supported   |
| Reverse Polarity Protection | Supported   |

## Physical Characteristics

|              |  |
|--------------|--|
| IP Rating    | IP30   |
| Dimensions   | 185 x 151 x 157.4 mm (7.28 x 5.95 x 6.20 in)           |
| Weight       | 2,509 g (5.53 lb)                                      |
| Installation | DIN-rail mounting<br>Wall mounting (with optional kit) |

## Environmental Limits

|  |   |
|--|---|
| Operating Temperature                  | EDS-619: 0 to 60°C (32 to 140°F)<br>EDS-619-T: -40 to 75°C (-40 to 167°F) |
| Storage Temperature (package included) | -40 to 85°C (-40 to 185°F)  |
| Ambient Relative Humidity              | 5 to 95% (non-condensing)   |

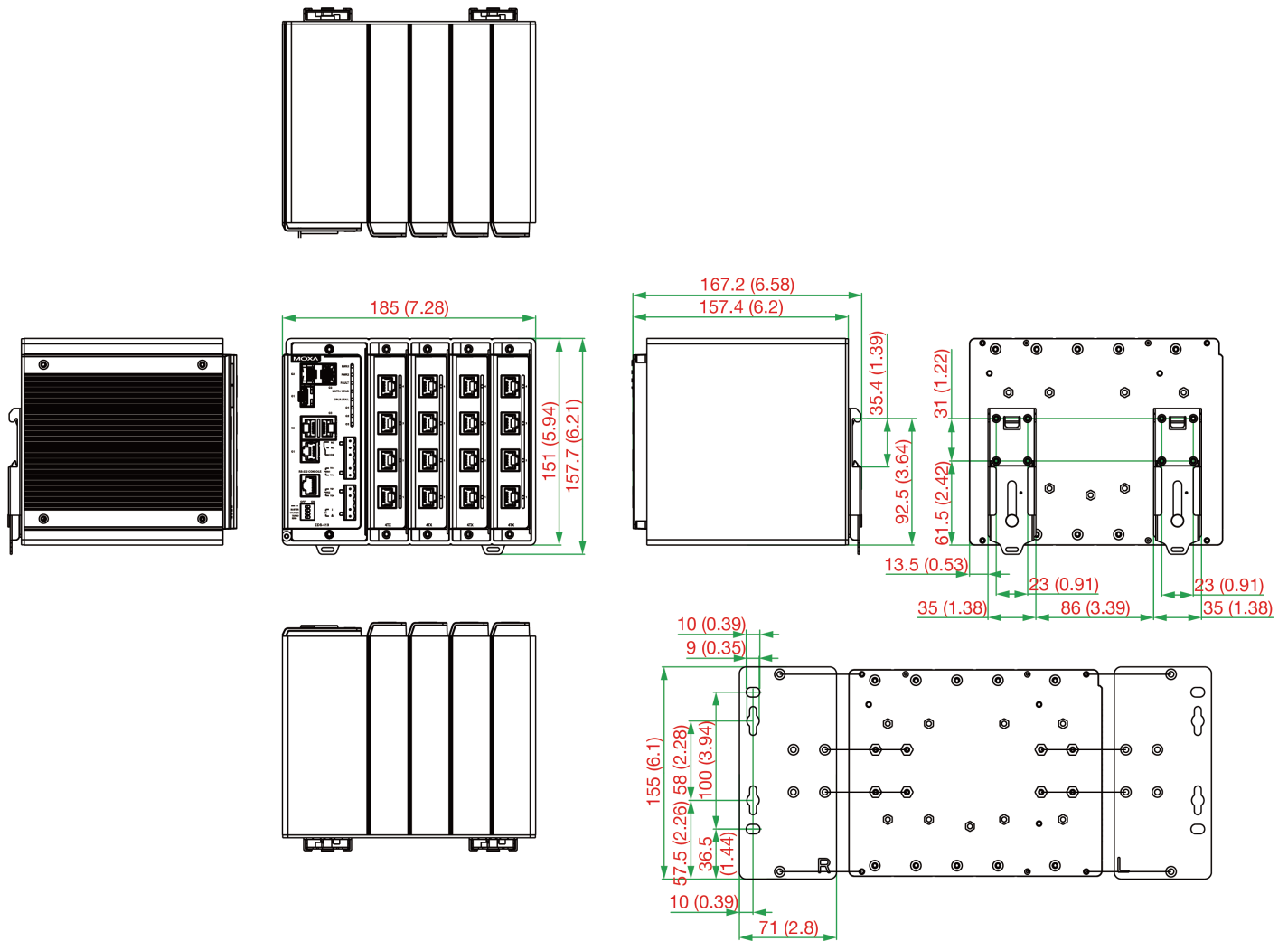
## Standards and Certifications

|          |                                  |
|----------|----------------------------------|
| Freefall | IEC 60068-2-32                   |
| EMC      | EN 55032/35<br>EN 61000-6-2/-6-4 |

|                         |  |
|-------------------------|--|
| EMI                     | CISPR 32, FCC Part 15B Class A   |
| EMS                     | IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV<br>IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m<br>IEC 61000-4-4 EFT: Power: 4 kV; Signal: 4 kV<br>IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV<br>IEC 61000-4-6 CS: 10 V<br>IEC 61000-4-8 PFMF |
| Hazardous Locations     | ATEX<br>Class I Division 2   |
| Maritime                | ABS<br>DNV<br>LR<br>NK   |
| Railway                 | EN 50121-4   |
| Safety                  | UL 508   |
| Shock                   | IEC 60068-2-27   |
| Traffic Control         | NEMA TS2   |
| Vibration               | IEC 60068-2-6  |
| <b>MTBF</b>             |  |
| Time                    | 475,816 hrs  |
| Standards               | Telcordia (Bellcore), GB   |
| <b>Warranty</b>         |  |
| Warranty Period         | 5 years  |
| Details                 | See <a href="http://www.moxa.com/warranty">www.moxa.com/warranty</a>   |
| <b>Package Contents</b> |  |
| Device                  | 1 x EDS-619 Series switch  |
| Cable                   | 1 x RJ45-to-DB9 console cable  |
| Documentation           | 1 x product certificates of quality inspection, Simplified Chinese<br>1 x product notice, Simplified Chinese<br>1 x quick installation guide<br>1 x warranty card  |
| Note                    | SFP modules and/or modules from the CM-600 Module Series need to be purchased separately for use with this product.  |

## Dimensions

Unit: mm (inch)



## Ordering Information

| Model Name | Layer | Total No. of Ports | Module 10/100BaseT(X) and/or 100BaseFX                     | Combo Ports 10/100/1000BaseT(X) or 100/1000BaseSFP | Operating Temp. |
|------------|-------|--------------------|--|--|-----------------|
| EDS-619    | 2     | 19                 | 4 slots for up to 16 10/100BaseT(X) and/or 100BaseFX ports | 3  | 0 to 60°C       |
| EDS-619-T  | 2     | 19                 | 4 slots for up to 16 10/100BaseT(X) and/or 100BaseFX ports | 3  | -40 to 75°C     |

## Accessories (sold separately)

### CM-600 Module Series

|             |   |
|-------------|---|
| CM-600-4TX  | Fast Ethernet interface module with 4 10/100BaseT(X) ports, RJ45 connectors, -40 to 75°C operating temperature      |
| CM-600-4MSC | Fast Ethernet interface module with 4 100BaseFX multi-mode ports, SC connectors, -40 to 75°C operating temperature  |
| CM-600-4MST | Fast Ethernet interface module with 4 100BaseFX multi-mode ports, ST connectors, -40 to 75°C operating temperature  |
| CM-600-4SSC | Fast Ethernet interface module with 4 100BaseFX single-mode ports, SC connectors, -40 to 75°C operating temperature |

|                 |  |
|-----------------|--|
| CM-600-3MSC/1TX | Fast Ethernet interface module with 1 10/100BaseT(X) port, RJ45 connector, and 3 100BaseFX multi-mode ports, SC connectors, -40 to 75°C operating temperature    |
| CM-600-3SSC/1TX | Fast Ethernet interface module with 1 10/100BaseT(X) port, RJ45 connector, and 3 100BaseFX single-mode ports, SC connectors, -40 to 75°C operating temperature   |
| CM-600-2MSC/2TX | Fast Ethernet interface module with 2 10/100BaseT(X) ports, RJ45 connectors, and 2 100BaseFX multi-mode ports, SC connectors, -40 to 75°C operating temperature  |
| CM-600-2SSC/2TX | Fast Ethernet interface module with 2 10/100BaseT(X) ports, RJ45 connectors, and 2 100BaseFX single-mode ports, SC connectors, -40 to 75°C operating temperature |

#### Storage Kits

|        |  |
|--------|--|
| ABC-01 | Configuration backup and restoration tool for managed Ethernet switches and AWK Series wireless APs/bridges/clients, 0 to 60°C operating temperature |
|--------|--|

#### SFP Modules

|                 |  |
|-----------------|--|
| SFP-1FELLC-T    | SFP module with 1 100Base single-mode with LC connector for 80 km transmission, -40 to 85°C operating temperature                                      |
| SFP-1FEMLC-T    | SFP module with 1 100Base multi-mode, LC connector for 2/4 km transmission, -40 to 85°C operating temperature  |
| SFP-1FESLC-T    | SFP module with 1 100Base single-mode with LC connector for 40 km transmission, -40 to 85°C operating temperature                                      |
| SFP-1G10ALC     | WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 10 km transmission; TX 1310 nm, RX 1550 nm, 0 to 60°C operating temperature   |
| SFP-1G10ALC-T   | WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 10 km transmission; TX 1310 nm, RX 1550 nm, -40 to 85°C operating temperature |
| SFP-1G10BLC     | WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 10 km transmission; TX 1550 nm, RX 1310 nm, 0 to 60°C operating temperature   |
| SFP-1G10BLC-T   | WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 10 km transmission; TX 1550 nm, RX 1310 nm, -40 to 85°C operating temperature |
| SFP-1G20ALC     | WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 20 km transmission; TX 1310 nm, RX 1550 nm, 0 to 60°C operating temperature   |
| SFP-1G20ALC-T   | WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 20 km transmission; TX 1310 nm, RX 1550 nm, -40 to 85°C operating temperature |
| SFP-1G20BLC     | WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 20 km transmission; TX 1550 nm, RX 1310 nm, 0 to 60°C operating temperature   |
| SFP-1G20BLC-T   | WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 20 km transmission; TX 1550 nm, RX 1310 nm, -40 to 85°C operating temperature |
| SFP-1G40ALC     | WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 40 km transmission; TX 1310 nm, RX 1550 nm, 0 to 60°C operating temperature   |
| SFP-1G40ALC-T   | WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 40 km transmission; TX 1310 nm, RX 1550 nm, -40 to 85°C operating temperature |
| SFP-1G40BLC     | WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 40 km transmission; TX 1550 nm, RX 1310 nm, 0 to 60°C operating temperature   |
| SFP-1G40BLC-T   | WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 40 km transmission; TX 1550 nm, RX 1310 nm, -40 to 85°C operating temperature |
| SFP-1GEZXLC     | SFP module with 1 1000BaseEZ port with LC connector for 110 km transmission, 0 to 60°C operating temperature   |
| SFP-1GEZXLC-120 | SFP module with 1 1000BaseEZ port with LC connector for 120 km transmission, 0 to 60°C operating temperature   |
| SFP-1GLHLC      | SFP module with 1 1000BaseLH port with LC connector for 30 km transmission, 0 to 60°C operating temperature  |
| SFP-1GLHLC-T    | SFP module with 1 1000BaseLH port with LC connector for 30 km transmission, -40 to 85°C operating temperature  |
| SFP-1GLHXLC     | SFP module with 1 1000BaseLHX port with LC connector for 40 km transmission, 0 to 60°C operating temperature   |
| SFP-1GLHXLC-T   | SFP module with 1 1000BaseLHX port with LC connector for 40 km transmission, -40 to 85°C operating temperature   |

|                |   |
|----------------|---|
| SFP-1GLSXLC    | SFP module with 1 1000BaseLSX port with LC connector for 1 km/2km transmission, 0 to 60°C operating temperature   |
| SFP-1GLSXLC-T  | SFP module with 1 1000BaseLSX port with LC connector for 1 km/2km transmission, -40 to 85°C operating temperature |
| SFP-1GLXLC     | SFP module with 1 1000BaseLX port with LC connector for 10 km transmission, 0 to 60°C operating temperature       |
| SFP-1GLXLC-T   | SFP module with 1 1000BaseLX port with LC connector for 10 km transmission, -40 to 85°C operating temperature     |
| SFP-1GSXLC     | SFP module with 1 1000BaseSX port with LC connector for 300m/550m transmission, 0 to 60°C operating temperature   |
| SFP-1GSXLC-T   | SFP module with 1 1000BaseSX port with LC connector for 300m/550m transmission, -40 to 85°C operating temperature |
| SFP-1GZXLC     | SFP module with 1 1000BaseZX port with LC connector for 80 km transmission, 0 to 60°C operating temperature       |
| SFP-1GZXLC-T   | SFP module with 1 1000BaseZX port with LC connector for 80 km transmission, -40 to 85°C operating temperature     |
| SFP-1GTXRJ45-T | SFP module with 1 1000BaseT port with RJ45 connector for 100 m transmission, -40 to 75°C operating temperature    |

### Power Supplies

|           |   |
|-----------|---|
| DR-120-24 | 120W/2.5A DIN-rail 24 VDC power supply with universal 88 to 132 VAC or 176 to 264 VAC input by switch, or 248 to 370 VDC input, -10 to 60°C operating temperature |
| DR-4524   | 45W/2A DIN-rail 24 VDC power supply with universal 85 to 264 VAC or 120 to 370 VDC input, -10 to 50°C operating temperature                                       |
| DR-75-24  | 75W/3.2A DIN-rail 24 VDC power supply with universal 85 to 264 VAC or 120 to 370 VDC input, -10 to 60°C operating temperature                                     |
| MDR-40-24 | DIN-rail 24 VDC power supply with 40W/1.7A, 85 to 264 VAC, or 120 to 370 VDC input, -20 to 70°C operating temperature   |
| MDR-60-24 | DIN-rail 24 VDC power supply with 60W/2.5A, 85 to 264 VAC, or 120 to 370 VDC input, -20 to 70°C operating temperature   |

### Software

|                   |  |
|-------------------|--|
| MXview-50         | Industrial network management software with a license for 50 nodes (by IP address)             |
| MXview-100        | Industrial network management software with a license for 100 nodes (by IP address)            |
| MXview-250        | Industrial network management software with a license for 250 nodes (by IP address)            |
| MXview-500        | Industrial network management software with a license for 500 nodes (by IP address)            |
| MXview-1000       | Industrial network management software with a license for 1000 nodes (by IP address)           |
| MXview-2000       | Industrial network management software with a license for 2000 nodes (by IP address)           |
| MXview Upgrade-50 | License expansion of MXview industrial network management software by 50 nodes (by IP address) |

### Wall-Mounting Kits

|       |   |
|-------|---|
| WK-75 | Wall-mounting kit, 2 plates, 8 screws, 75 x 90 x 2.5 mm |
|-------|---|

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