

# EDS-608/611/616/619 Series



**8, 8+3G, 16, 16+3G-port compact modular managed Ethernet switches**



- Up to 19 optical fiber connections in a compact switch (EDS-619)
- Modular design with 4-port copper/fiber combinations
- Hot swap media modules for continuous operation
- 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
- -40 to 75°C operating temperature range (T models)



## Introduction

The versatile modular design of the compact EDS-600 series Ethernet switch allows users to combine fiber and copper modules to create switch solutions suitable for any automation network. The EDS-600'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 helps 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-600 series supports several reliable and intelligent functions, including IEEE 1588 PTP V2, 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.

## Features and Benefits

- Command Line Interface (CLI) for quickly configuring major managed functions
- Hot swap media modules for continuous operation
- Turbo Ring and Turbo Chain (recovery time < 20 ms @ 250 switches), RSTP/STP, and MSTP for network redundancy
- IPv6 Ready logo awarded (IPv6 Logo Committee certified)
- SNMP Inform for ensuring reliable event management
- LLDP for automated topology discovery
- DHCP Option 82 for IP address assignment with different policies
- IEEE 1588 PTP V2 (Precision Time Protocol) for precise time synchronization of networks
- Support EtherNet/IP and Modbus/TCP protocols for device management and monitoring
- Compatible with EtherNet/IP and PROFINET protocols for transparent data transmission
- 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
- Digital inputs to integrate sensors and alarms with IP networks

## 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, GMRP, GVRP, SNMPv1/v2c/v3, DHCP Server/Client, DHCP Option 66/67/82, BootP, TFTP, SMTP, RARP, RMON, HTTP, HTTPS, Telnet, SSH, Syslog, LLDP, EtherNet/IP, Modbus/TCP, 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:** 64

**VLAN ID Range:** VID 1 to 4094

**IGMP Groups:** 256

**MAC Table Size:** 8 K

**Packet Buffer Size:** 1 Mbit

## Interface

**Fast Ethernet:** 2 or 4 slots for any combination of 4-port interface modules, 10/100BaseT(X) or 100BaseFX

**Gigabit Ethernet:** 3 10/100/1000BaseT(X) with 100/1000BaseSFP combo slots (EDS-611 and EDS-619 only)

**Console Port:** RS-232 (RJ45 connector)

**DIP Switches:** Turbo Ring, Master, Coupler, Reserve

**System LED Indicators:** PWR1, PWR2, FAULT, MSTR/HEAD, CPLR/ TAIL, G1/G2/G3 (EDS-611 and EDS-619 only)

**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 +30V for state "1"

- -30 to +3V for state "0"

- Max. input current: 8 mA

## Power Requirements

**Input Voltage:** 12/24/48 VDC, redundant dual inputs

**Input Current:**

EDS-608: 0.16A @ 24 V

EDS-611: 0.31A @ 24 V

EDS-616: 0.25A @ 24 V

EDS-619: 0.31A @ 24 V

**Overload Current Protection:** Present

**Connection:** 1 removable 5-contact and 1 removable 6-contact terminal block

**Reverse Polarity Protection:** Present

## Physical Characteristics

**Housing:** IP30 protection

**Dimensions:**

EDS-608/611 Series: 124.9 x 151 x 157.2 mm (4.92 x 5.95 x 6.19 in)

EDS-616/619 Series: 185 x 151 x 157.2 mm (7.28 x 5.95 x 6.19 in)

## Weight:

EDS-608: 2080 g

EDS-611: 2260 g

EDS-616: 2780 g

EDS-619: 2950 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, UL 60950-1, EN 60950-1

**Hazardous Location:** UL/cUL Class I Division 2 Groups A/B/C/D, ATEX Zone 2 Ex nCnAnL IIC T4

**EMI:** FCC Part 15 Subpart B Class A, EN 55022 Class A, EN 61000-6-4

**EMS:** EN 61000-6-2

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, EN 61000-4-29

**Marine:** DNV, GL, LR, ABS, NK

**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-608: 506,219 hrs

EDS-611: 483,344 hrs

EDS-616: 546,937 hrs

EDS-619: 475,816 hrs

**Database:** Telcordia (Bellcore), GB

## Warranty

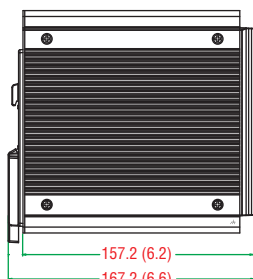
**Warranty Period:** 5 years

**Details:** See [www.moxa.com/warranty](http://www.moxa.com/warranty)

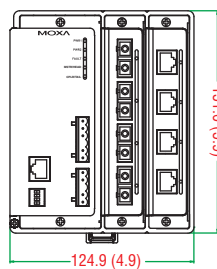
## Dimensions

### EDS-608/611 Series

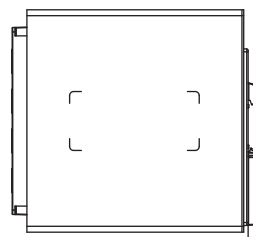
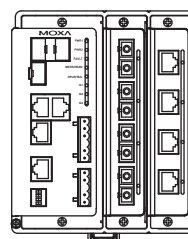
Unit: mm (inch)



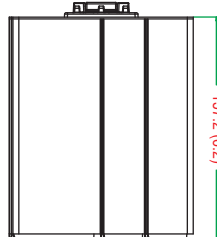
Side View



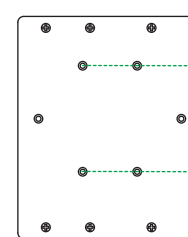
Front Views



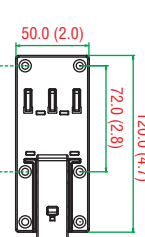
Side View



Top View



Rear View

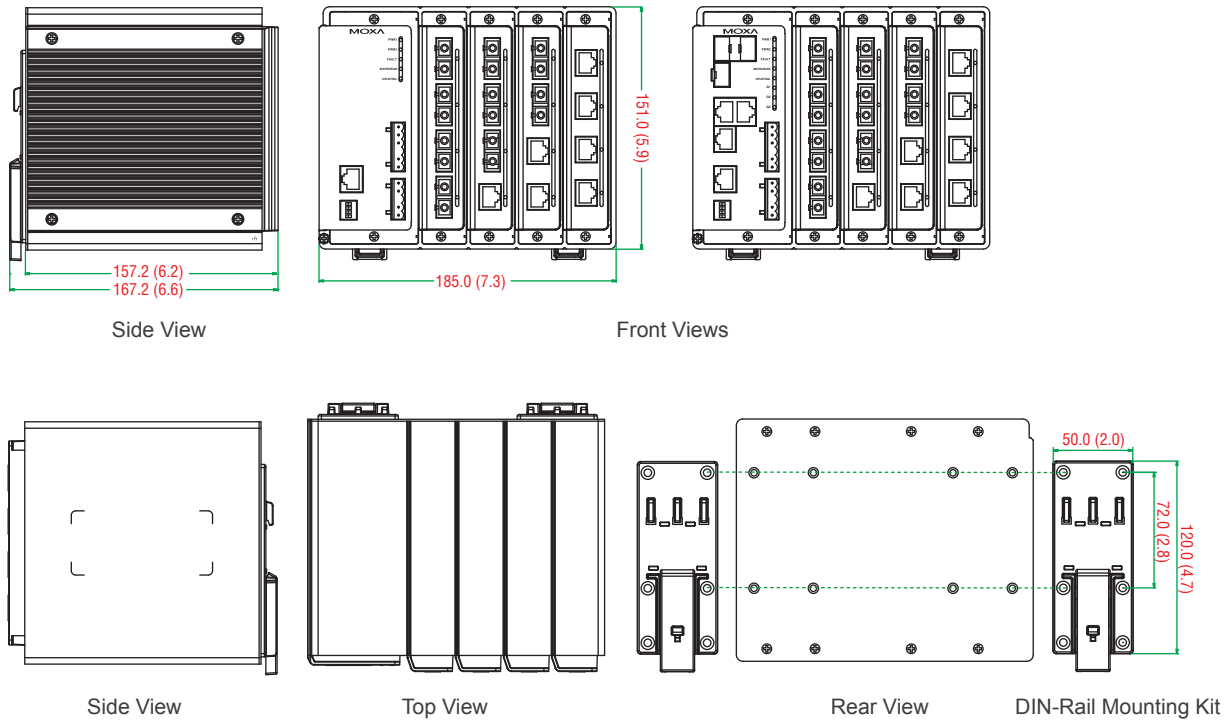


DIN-Rail Mounting Kit

## Dimensions

Unit: mm (inch)

### EDS-616/619 Series



## : Ordering Information

Step 1: Select Ethernet switch system

Step 2: Select interface modules

EDS-608/611/616/619



CM-600 Series  
(Fast Ethernet)

Note: The EDS-600 switch system is delivered without interface modules. Please see page 4 for product information related to the CM-600 series Fast Ethernet interface modules.

| Available Models                    |                                   | Total No. of Ports | Port Interface                             |               |                                 |
|-------------------------------------|-----------------------------------|--------------------|--------------------------------------------|---------------|---------------------------------|
|                                     |                                   |                    | Gigabit Ethernet                           | Fast Ethernet |                                 |
| Standard Temperature<br>(0 to 60°C) | Wide Temperature<br>(-40 to 75°C) |                    | 10/100/1000BaseT(X) or<br>100/1000BaseSFP* | Slots         | 10/100BaseT(X) and/or 100BaseFX |
| EDS-608                             | EDS-608-T                         | 8                  | —                                          | 2             | up to 8                         |
| EDS-611                             | EDS-611-T                         | 11                 | 3                                          | 2             | up to 8                         |
| EDS-616                             | EDS-616-T                         | 16                 | —                                          | 4             | up to 16                        |
| EDS-619                             | EDS-619-T                         | 19                 | 3                                          | 4             | up to 16                        |

\*The EDS-611/619 series supports 3 100/1000BaseSFP slots. See pages 5 and 7 for SFP-1G/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-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-75:** Wall mounting kit

**AVK-17:** Anti-vibration wiring Kit

### Package Checklist

- EDS-608 or EDS-611 or EDS-616 or EDS-619 switch
- RJ45 to DB9 console port cable
- Documentation and software CD
- Hardware installation guide (printed)
- Warranty card

# CM-600 Series

## 4-port Fast Ethernet interface modules for EDS-600 series Ethernet switches

### Specifications

#### Fast Ethernet Interface Modules, CM-600 Series



CM-600-4TX  
CM-600-4TX-BP  
CM-600-4TX-PTP



CM-600-4MSC  
CM-600-4SSC



CM-600-4MST



CM-600-3MSC/1TX  
CM-600-3SSC/1TX



CM-600-3MST/1TX



CM-600-2MSC/2TX  
CM-600-2SSC/2TX



CM-600-2MST/2TX

#### 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

**LED Indicators:** 10/100 for TP port, 100M for fiber port

#### 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 <sup>a</sup><br>4 km <sup>b</sup> | 40 km <sup>c</sup> |
| Saturation       | -6 dBm                                 | -3 dBm             |

a. 50/125  $\mu$ m, 800 MHz\*km fiber optic cable  
b. 62.5/125  $\mu$ m, 500 MHz\*km fiber optic cable  
c. 9/125  $\mu$ m single-mode fiber optic cable

#### Power Requirements

##### Power Consumption:

CM-600-4TX: 0.72 W

CM-600-4TX-BP: 2.81 W

CM-600-4TX-PTP: 4.08 W

CM-600-4MSC, -4MST, -4SSC: 2.64 W

CM-600-3MSC/1TX, -3MST/1TX, -3SSC/1TX: 2.16 W

CM-600-2MSC/2TX, -2MST/2TX, -2SSC/2TX: 1.68 W

#### Physical Characteristics

**Housing:** IP30 protection

**Dimensions:** 29.7 x 144.4 x 144.8 mm (1.17 x 5.69 x 5.7 in)

#### Weight:

CM-600-4TX: 190 g

CM-600-4TX-BP: 240 g

CM-600-4TX-PTP: 185 g

CM-600-4MSC, -4MST, -4SSC: 240 g

CM-600-3MSC/1TX, -3MST/1TX, -3SSC/1TX: 230 g

CM-600-2MSC/2TX, -2MST/2TX, -2SSC/2TX: 230 g

#### MTBF (mean time between failures)

**Time:** 740,661 hrs

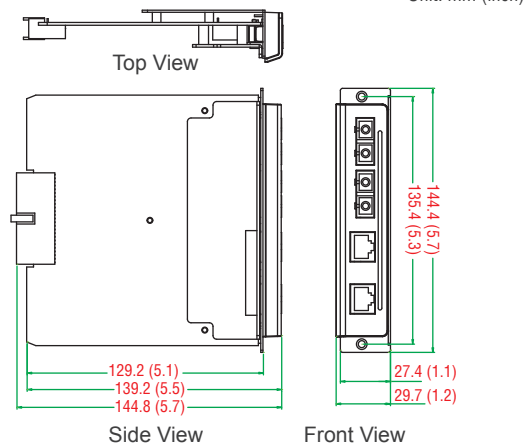
**Database:** Telcordia (Bellcore), GB

#### Warranty

**Warranty Period:** 5 years

**Details:** See [www.moxa.com/warranty](http://www.moxa.com/warranty)

#### Dimensions



### Ordering Information

| Available Models<br>(-40 to 75°C) | Port Interface |                          |                          |                           |
|-----------------------------------|----------------|--------------------------|--------------------------|---------------------------|
|                                   | 10/100BaseT(X) | 100BaseFX                |                          |                           |
|                                   |                | Multi-mode, SC Connector | Multi-mode, ST Connector | Single-mode, SC Connector |
| CM-600-4TX                        | 4              | —                        | —                        | —                         |
| CM-600-4TX-BP*                    | 4              | —                        | —                        | —                         |
| CM-600-4TX-PTP*                   | 4              | —                        | —                        | —                         |
| CM-600-4MSC                       | —              | 4                        | —                        | —                         |
| CM-600-4MST                       | —              | —                        | 4                        | —                         |
| CM-600-4SSC                       | —              | —                        | —                        | 4                         |
| CM-600-3MSC/1TX                   | 1              | 3                        | —                        | —                         |
| CM-600-3MST/1TX                   | 1              | —                        | 3                        | —                         |
| CM-600-3SSC/1TX                   | 1              | —                        | —                        | 3                         |
| CM-600-2MSC/2TX                   | 2              | 2                        | —                        | —                         |
| CM-600-2MST/2TX                   | 2              | —                        | 2                        | —                         |
| CM-600-2SSC/2TX                   | 2              | —                        | —                        | 2                         |

#### Package Checklist

- CM-600 interface module
- Warranty card

\*The CM-600-4TX-BP supports the bypass relay function on each port; the CM-600-4TX-PTP supports the IEEE 1588 PTP V2 protocol on each port.

# SFP-1G Series

## 1-port Gigabit Ethernet SFP modules



- > IEEE 802.3z compliant
- > Differential LVPECL inputs and outputs
- > TTL signal detect indicator
- > Hot pluggable LC duplex connector
- > Class 1 laser product, complies with EN 60825-1



## : Specifications

### Interface

**Ethernet Ports:** 1

**Connectors:** Duplex LC Connector or Simplex LC Connector (WDM-type only)

**Note:** WDM-type SFP modules must be used in pairs (e.g., SFP-1GXXALC and SFP-1GXXBLC)

**Note:** When connecting long distance SFP (SFP-ZX, EZX or EZX-120), please ensure at least 5 dB attenuation between both ends. Without attenuation, excessive optical power may damage the transceivers.

### Optical Fiber

|                  | Gigabit Ethernet   |                   |                    |                    |                    |                    |                     |                     |                           |                           |                           |                           |                           |                           |
|------------------|--------------------|-------------------|--------------------|--------------------|--------------------|--------------------|---------------------|---------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|
|                  | SFP-SX             | SFP-LSX           | SFP-LX             | SFP-LH             | SFP-LHX            | SFP-ZX             | SFP-EZX             | SFP-EZX-120         | SFP-10A                   | SFP-10B                   | SFP-20A                   | SFP-20B                   | SFP-40A                   | SFP-40B                   |
| Wavelength       | 850 nm             | 1310 nm           | 1310 nm            | 1310 nm            | 1310 nm            | 1550 nm            | 1550 nm             | 1550 nm             | TX 1310 nm,<br>RX 1550 nm | TX 1550 nm,<br>RX 1310 nm | TX 1310 nm,<br>RX 1550 nm | TX 1550 nm,<br>RX 1310 nm | TX 1310 nm,<br>RX 1550 nm | TX 1550 nm,<br>RX 1310 nm |
| Max. TX          | -4 dBm             | -1 dBm            | -3 dBm             | -2 dBm             | 1 dBm              | 5 dBm              | 5 dBm               | 3 dBm               | -3 dBm                    | -3 dBm                    | -2 dBm                    | -2 dBm                    | 2 dBm                     | 2 dBm                     |
| Min. TX          | -9.5 dBm           | -9 dBm            | -9.5 dBm           | -8 dBm             | -4 dBm             | 0 dBm              | 0 dBm               | -2 dBm              | -9 dBm                    | -9 dBm                    | -8 dBm                    | -8 dBm                    | -3 dBm                    | -3 dBm                    |
| RX Sensitivity   | -18 dBm            | -19 dBm           | -20 dBm            | -23 dBm            | -24 dBm            | -24 dBm            | -30 dBm             | -33 dBm             | -21 dBm                   | -21 dBm                   | -23 dBm                   | -23 dBm                   | -23 dBm                   | -23 dBm                   |
| Link Budget      | 8.5 dB             | 10 dB             | 10.5 dB            | 15 dB              | 20 dB              | 24 dB              | 30 dB               | 31 dB               | 12 dB                     | 12 dB                     | 15 dB                     | 15 dB                     | 20 dB                     | 20 dB                     |
| Typical Distance | 550 m <sup>a</sup> | 2 km <sup>b</sup> | 10 km <sup>c</sup> | 30 km <sup>c</sup> | 40 km <sup>c</sup> | 80 km <sup>c</sup> | 110 km <sup>c</sup> | 120 km <sup>c</sup> | 10 km <sup>c</sup>        | 10 km <sup>c</sup>        | 20 km <sup>c</sup>        | 20 km <sup>c</sup>        | 40 km <sup>c</sup>        | 40 km <sup>c</sup>        |
| Saturation       | 0 dBm              | -3 dBm            | -3 dBm             | -3 dBm             | -3 dBm             | -3 dBm             | -3 dBm              | -8 dBm              | -1 dBm                    | -1 dBm                    | -1 dBm                    | -1 dBm                    | -1 dBm                    | -1 dBm                    |

a. 50/125 μm, 400 MHz \* km or 62.5/125 μm, 500 MHz \* km @ 850 nm multi-mode fiber optic cable

b. 62.5/125 μm, 750 MHz \* km @ 1310 nm multi-mode fiber optic cable

c. 9/125 μm single-mode fiber optic cable

**Note:** The actual communication distance depends on many factors, including connector loss, cable deployment, and the age of the cabling system. We recommend doing a link budget analysis and reserving a 3 dB margin for such factors.

### Environmental Limits

#### Operating Temperature:

Standard Models: 0 to 60°C (32 to 140°F)

Wide Temp. Models: -40 to 85°C (-40 to 185°F)

**Storage Temperature:** -40 to 85°C (-40 to 185°F)

**Ambient Relative Humidity:** 5 to 95% (non-condensing)

### Standards and Certifications

**Safety:** UL 60950-1, TÜV

### Warranty

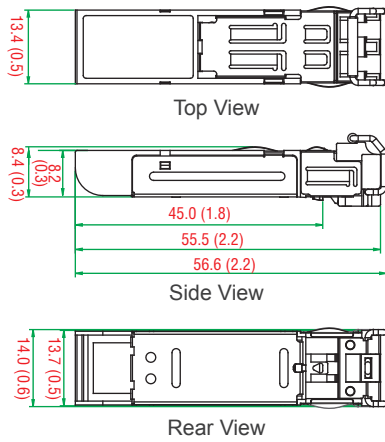
**Warranty Period:** 5 years

**Details:** See [www.moxa.com/warranty](http://www.moxa.com/warranty)

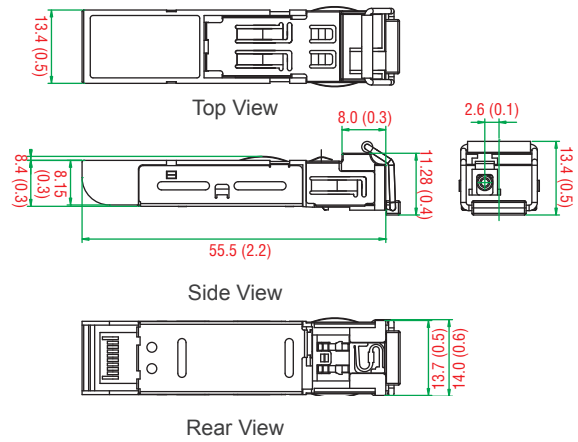
## Dimensions

Unit: mm (inch)

### SFP-1G Series



### SFP-1G Series (WDM Type)



## : Ordering Information

### SFP Modules

| Available Models                    |                                   | Port Interface                         |                                       |                                       |                                       |                                        |                                       |                                        |                                        |
|-------------------------------------|-----------------------------------|----------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|----------------------------------------|---------------------------------------|----------------------------------------|----------------------------------------|
| Standard Temperature<br>(0 to 60°C) | Wide Temperature<br>(-40 to 85°C) | 1000BaseSX,<br>LC Connector,<br>0.5 km | 1000BaseLSX,<br>LC Connector,<br>2 km | 1000BaseLX,<br>LC Connector,<br>10 km | 1000BaseLH,<br>LC Connector,<br>30 km | 1000BaseLHX,<br>LC Connector,<br>40 km | 1000BaseZX,<br>LC Connector,<br>80 km | 1000BaseEZ,<br>LC Connector,<br>110 km | 1000BaseEZ,<br>LC Connector,<br>120 km |
| SFP-1GSXLC                          | SFP-1GSXLC-T*                     | 1                                      | —                                     | —                                     | —                                     | —                                      | —                                     | —                                      | —                                      |
| SFP-1GLSXLC                         | SFP-1GLSXLC-T                     | —                                      | 1                                     | —                                     | —                                     | —                                      | —                                     | —                                      | —                                      |
| SFP-1GLXLC                          | SFP-1GLXLC-T                      | —                                      | —                                     | 1                                     | —                                     | —                                      | —                                     | —                                      | —                                      |
| SFP-1GLHLC                          | SFP-1GLHLC-T                      | —                                      | —                                     | —                                     | 1                                     | —                                      | —                                     | —                                      | —                                      |
| SFP-1GLHLC                          | SFP-1GLHLC-T                      | —                                      | —                                     | —                                     | —                                     | 1                                      | —                                     | —                                      | —                                      |
| SFP-1GZXLC                          | SFP-1GZXLC-T                      | —                                      | —                                     | —                                     | —                                     | —                                      | 1                                     | —                                      | —                                      |
| SFP-1GEZLC                          | —                                 | —                                      | —                                     | —                                     | —                                     | —                                      | —                                     | 1                                      | —                                      |
| SFP-1GEZLC-120                      | —                                 | —                                      | —                                     | —                                     | —                                     | —                                      | —                                     | —                                      | 1                                      |

\* SFP-1GSXLC-T: -20 to 75°C operating temperature

### WDM-type (BiDi) SFP Modules

| Available Models                    |                                   | Port Interface                      |                           |                                     |                           |                                     |                           |
|-------------------------------------|-----------------------------------|-------------------------------------|---------------------------|-------------------------------------|---------------------------|-------------------------------------|---------------------------|
| Standard Temperature<br>(0 to 60°C) | Wide Temperature<br>(-40 to 85°C) | 1000BaseSFP,<br>LC Connector, 10 km |                           | 1000BaseSFP,<br>LC Connector, 20 km |                           | 1000BaseSFP,<br>LC Connector, 40 km |                           |
|                                     |                                   | TX 1310 nm,<br>RX 1550 nm           | TX 1550 nm,<br>RX 1310 nm | TX 1310 nm,<br>RX 1550 nm           | TX 1550 nm,<br>RX 1310 nm | TX 1310 nm,<br>RX 1550 nm           | TX 1550 nm,<br>RX 1310 nm |
| SFP-1G10ALC                         | SFP-1G10ALC-T                     | 1                                   | —                         | —                                   | —                         | —                                   | —                         |
| SFP-1G10BLC                         | SFP-1G10BLC-T                     | —                                   | 1                         | —                                   | —                         | —                                   | —                         |
| SFP-1G20ALC                         | SFP-1G20ALC-T                     | —                                   | —                         | 1                                   | —                         | —                                   | —                         |
| SFP-1G20BLC                         | SFP-1G20BLC-T                     | —                                   | —                         | —                                   | 1                         | —                                   | —                         |
| SFP-1G40ALC                         | SFP-1G40ALC-T                     | —                                   | —                         | —                                   | —                         | 1                                   | —                         |
| SFP-1G40BLC                         | SFP-1G40BLC-T                     | —                                   | —                         | —                                   | —                         | —                                   | 1                         |

### Available Models

The SFP-1G series modules can be used with the following products:

ICS-G7826/G7828 series, ICS-G7526/G7528 series, IKS-G6524/G6824 series, IKS-6726/6728 series, EDS-611/619 series, EDS-G509 series, EDS-518A series, EDS-510A series, EDS-G308 series, EDS-P510 series, EDS-G205-4PoE series, IM-G7000-4GSFP, IM-2GSFP, PM-7200-2G/4G series, PT-G7509, EDR-G903/G902 series, IMC-101G series

### Package Checklist

- SFP-1G module
- Warranty card

# SFP-1FE Series

## 1-port fast Ethernet SFP modules



- > IEEE 802.3u compliant
- > Differential PECL inputs and outputs
- > TTL signal detect indicator
- > Hot pluggable LC duplex connector
- > Class 1 laser product; complies with EN 60825-1



### Specifications

#### Interface

Ethernet Ports: 1

Connectors: Duplex LC Connector

#### Optical Fiber

|                  | Fast Ethernet     |                    |                    |
|------------------|-------------------|--------------------|--------------------|
|                  | SFP-M             | SFP-S              | SFP-L              |
| Wavelength       | 1300 nm           | 1310 nm            | 1550 nm            |
| Max. TX          | -18 dBm           | 0 dBm              | 0 dBm              |
| Min. TX          | -8 dBm            | -5 dBm             | -5 dBm             |
| RX Sensitivity   | -34 dBm           | -34 dBm            | -34 dBm            |
| Link Budget      | 26 dB             | 29 dB              | 29 dB              |
| Typical Distance | 4 km <sup>a</sup> | 40 km <sup>b</sup> | 80 km <sup>b</sup> |
| Saturation       | 0 dBm             | -3 dBm             | -3 dBm             |

a. 50/125  $\mu$ m or 62.5/125  $\mu$ m, 800 MHz \* km @ 1300 nm multi-mode fiber optic cable

b. 9/125  $\mu$ m single-mode fiber optic cable

#### Environmental Limits

Operating Temperature: -40 to 85°C (-40 to 185°F)

Storage Temperature: -40 to 85°C (-40 to 185°F)

Ambient Relative Humidity: 5 to 95% (non-condensing)

#### Standards and Certifications

Safety: UL 60950-1, TÜV

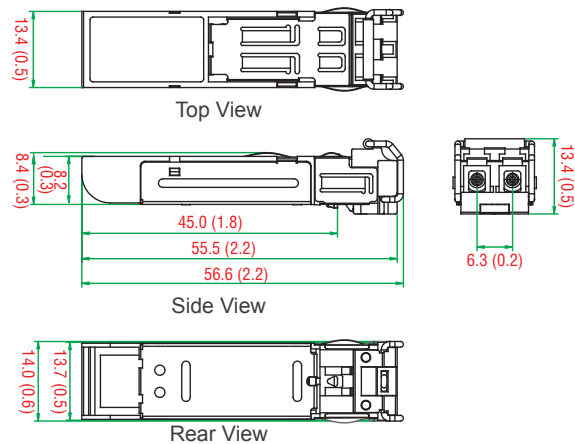
#### Warranty

Warranty Period: 5 years

Details: See [www.moxa.com/warranty](http://www.moxa.com/warranty)

#### Dimensions

Unit: mm (inch)



### Ordering Information

| Available Models                  | Port Interface                               |                                                |                                                |
|-----------------------------------|----------------------------------------------|------------------------------------------------|------------------------------------------------|
| Wide Temperature<br>(-40 to 85°C) | 100BaseFX, Multi-mode,<br>LC Connector, 4 km | 100BaseFX, Single-mode,<br>LC Connector, 40 km | 100BaseFX, Single-mode,<br>LC Connector, 80 km |
| SFP-1FEMLC-T                      | 1                                            | —                                              | —                                              |
| SFP-1FESLC-T                      | —                                            | 1                                              | —                                              |
| SFP-1FELLC-T                      | —                                            | —                                              | 1                                              |

#### Available Models

The SFP-1FE series modules can be used with the following products:

ICS-G7826/G7828 series, ICS-G7526/G7528 series, IKS-G6524/G6824 series, IKS-6726/6728 series, EDS-611/619 series, EDS-G509 series, EDS-G308-2SFP, EDS-P510 series, IM-G7000-4GSFP, PM-7200-8SFP, EDR-G903/G902 series, IM-6700-8SFP

#### Package Checklist

- SFP-1FE module
- Warranty card

# Tento produkt můžete zakoupit u společnosti AutoCont IPC a.s.



## AutoCont IPC a.s.

Váš dodavatel průmyslových počítačů, komponent a speciálních průmyslových IT systémů.

 Uhlířská 1064/3, 710 00 Ostrava, Česká republika

 obchod@autocont-ipc.cz

 +420 552 301 002

 [www.autocont-ipc.cz](http://www.autocont-ipc.cz)



### PRŮMYSLOVÉ POČÍTAČE

*fanless embedded PC, do racku, ...*



### POČÍTAČE S DISPLEJEM

*panelové PC, terminály, do vozidel, ...*



### AUTOMATIZACE A SBĚR DAT

*převodníky, karty, moduly, switche, ...*



### PERIFERIE A KOMPONENTY

*monitory, klávesnice, desky, skříně, ...*



### NOTEBOOKY A TABLETY

*odolné, windows, android, IP65, ...*



### INFORMAČNÍ KIOSKY

*interiérové, venkovní, ...*



### MEDICÍNSKÁ TECHNIKA

*počítače, tablety, LCD, klávesnice, ...*



### SOFTWAREVÁ ŘEŠENÍ

*pro výrobu, zaměstnance, kiosky, ...*



### PŘEJÍT DO E-SHOPU

[eshop.autocont-ipc.cz](http://eshop.autocont-ipc.cz)



### DOPRAVA ZDARMA

Doprava zdarma v ČR a SR při  
objednávce nad 10 000 Kč bez DPH  
nebo nad 400 EUR.



### PRODLOUŽENÁ ZÁRUKA

Záruka 2 roky na vyráběné počítače  
s možností jejího prodloužení  
až na 5 let.



### ODMĚNA ZA VĚRNOST

Pravidelní zákazníci u nás nakupují  
za nižší ceny. Výše slevy se odvíjí  
od realizovaného obrátu.



### SERVIS ON-SITE A IN-TIME

K projektovým dodávkám nabízíme  
rozšířenou podporu a servis s garancí  
výměny zařízení do 48 hodin.