EDS-G205/G308 Series

5G and 8G-port full Gigabit unmanaged Ethernet switches



- Fiber optic options for extending distance and electrical noise immunity (EDS-G308 series)
- Redundant dual 12/24/48 VDC power inputs
- Supports jumbo frame transmission up to 9.6 KB
- Relay output warning for power failure and port break alarm
- Broadcast storm protection
- -40 to 75°C operating temperature range (T models)

Introduction

The EDS-G205 and EDS-G308 switches are equipped with 5 and 8 Gigabit Ethernet ports, respectively, and up to 2 fiber optic ports (EDS-G308-2SFP series only), making them ideal for applications that demand high bandwidth. The EDS-G205/G308 switches provide an economical solution for your industrial Gigabit Ethernet connections, and the built-in relay warning function alerts network managers when power failures or port breaks occur. Two models are available in this series. One model has an operating temperature range of 0 to 60°C, and the other model has an extended operating temperature range of -40 to 75°C. Both models undergo a 100% burn-in test to ensure that they fulfill the special needs of industrial automation control applications. The EDS-G205/G308 switches can be installed easily on a DIN-Rail or in distribution boxes.

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
Processing Type: Store and Forward
Flow Control: IEEE 802.3x flow control, back pressure flow control

Switch Properties

MAC Table Size: 8 K
Packet Buffer Size: 1088 Kbit (EDS-G205), 1408 Kbit (EDS-G308)
Jumbo Frame Size: 9.6 KB

Interface

Fiber Ports: 100/1000BaseSFP slot (EDS-G308-2SFP series only)
RJ45 Ports: 10/100/1000BaseT(X) auto negotiation speed, Full/Half duplex mode, and auto MDI/MDI-X connection
DIP Switches: One for port break alarm, one for Enable/Disable broadcast storm protection and jumbo frame
LED Indicators: PWR1, PWR2, FAULT, 10/100/1000M
Alarm Contact: 1 relay output with current carrying capacity of 1 A @ 24 VDC

Power Requirements

Input Voltage: 12/24/48 VDC (9.6 to 60 VDC), redundant dual inputs
Input Current:
EDS-G205: 0.20 A @ 24 V
EDS-G308: 0.32 A @ 24 V
EDS-G308-2SFP: 0.34 A @ 24 V
Connection: 1 removable 6-contact terminal block
Reverse Polarity Protection: Present

Physical Characteristics

Housing: Metal, IP30 protection
Dimensions:
EDS-G205: 35 x 130 x 105 mm (1.37 x 5.12 x 4.13 in)
EDS-G308: 53.6 x 135 x 105 mm (2.11 x 5.31 x 4.13 in)
Weight:
EDS-G205: 290 g
EDS-G308: 630 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
Hazardous Location: UL/cUL Class I Division 2 Groups A/B/C/D, ATEX Zone 2 Ex nC IIC
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
Marine: DNV, GL, LR, ABS, NK
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-G308 Series: 325,000 hrs
EDS-G205 Series: 478,000 hrs
Database: Telcordia (Bellcore), GB (EDS-G308 series)

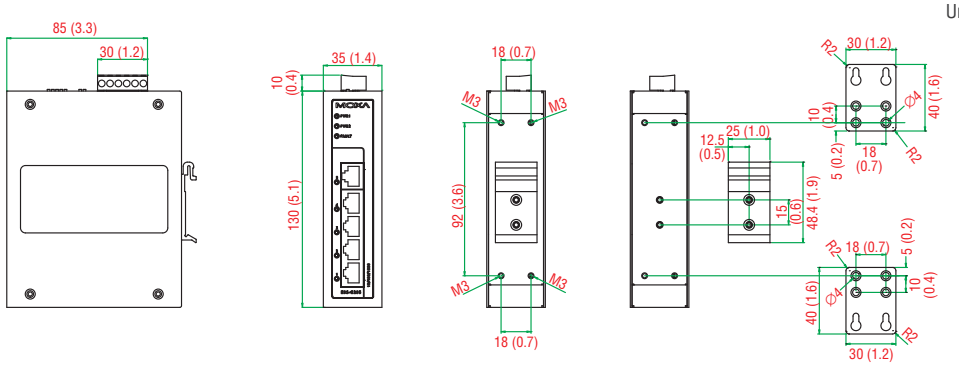
Warranty

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

Dimensions

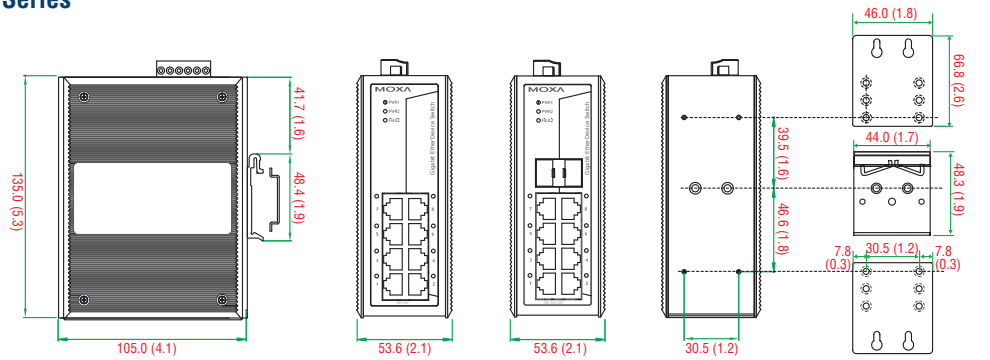
Unit: mm (inch)

EDS-G205



Side View | Front View | Rear Views | DIN-Rail/ Panel Mounting Kit

EDS-G308 Series



Side View | Front Views | Rear View | DIN-Rail/ Panel Mounting Kit

Ordering Information

Product Model		Port Interface	
		Gigabit Ethernet	
Standard Temperature (0 to 60°C)	Wide Temperature (-40 to 75°C)	10/100/1000BaseT(X)	Combo Port, 10/100/1000BaseT(X) or 100/1000BaseSFP*
EDS-G205	EDS-G205-T	5	–
EDS-G308	EDS-G308-T	8	–
EDS-G308-2SFP	EDS-G308-2SFP-T	6	2

*The EDS-G308-2SFP and EDS-G308-2SFP-T support 2 100/1000BaseSFP slots. See pages 1-87 and 1-89 for SFP-1G/1FE series Gigabit/fast Ethernet SFP module product information.

Optional Accessories (can be purchased separately)

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-30: Wall mounting kit (EDS-G205 series only)
WK-46: Wall mounting kit (EDS-G308 series only)
RK-4U: 4U-high 19" rack mounting kit

Package Checklist

- EDS-G205 or EDS-G308 switch
- Protective caps for unused ports (EDS-G308 only)
- Hardware installation guide (printed)
- Warranty card

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)

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, RX 1550 nm	TX 1550 nm, RX 1310 nm	TX 1310 nm, RX 1550 nm	TX 1550 nm, RX 1310 nm	TX 1310 nm, RX 1550 nm	TX 1550 nm, RX 1310 nm
Max. TX	-4 dBm	-1 dBm	-3 dBm	-2 dBm	1 dBm	5 dBm	5 dBm	3 dBm	-3 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		-8 dBm		-3 dBm	
RX Sensitivity	-18 dBm	-19 dBm	-20 dBm	-23 dBm	-24 dBm	-24 dBm	-30 dBm	-33 dBm	-21 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		15 dB		20 dB	
Typical Distance	550 m[a]	2 km[b]	10 km[c]	30 km[c]	40 km[c]	80 km[c]	110 km[c]	120 km[c]	10 km[c]		20 km[c]		40 km[c]	
Saturation	0 dBm	-3 dBm	-3 dBm	-3 dBm	-3 dBm	-3 dBm	-3 dBm	-8 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 Operating 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

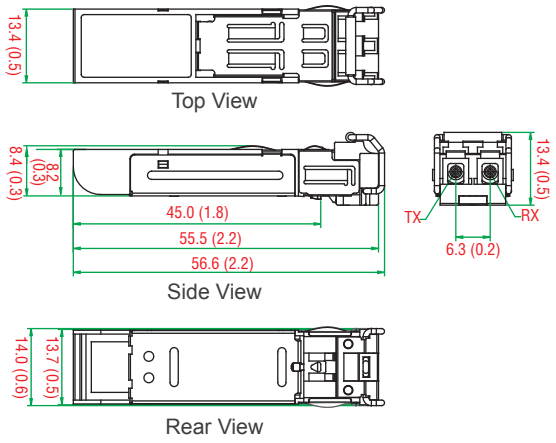
Warranty

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

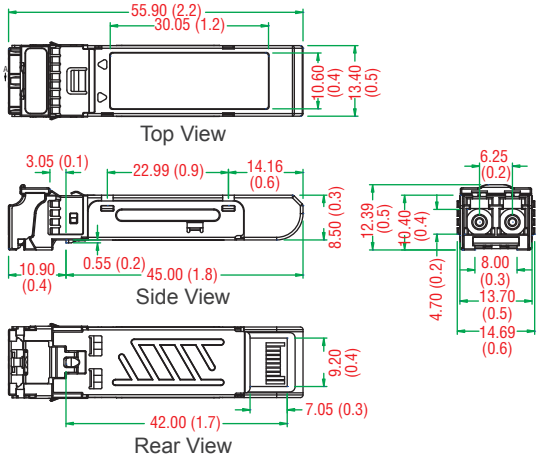
Dimensions

Unit: mm (inch)

SFP-1G Series



SFP-1GEZXLC-120



Ordering Information

SFP Modules

Available Models		Port Interface							
Standard Temperature (0 to 60°C)	Wide Temperature (-40 to 85°C)	1000BaseSX, LC Connector, 0.5 km	1000BaseLSX, LC Connector, 2 km	1000BaseLX, LC Connector, 10 km	1000BaseLH, LC Connector, 30 km	1000BaseLHX, LC Connector, 40 km	1000BaseZX, LC Connector, 80 km	1000BaseEZX, LC Connector, 110 km	1000BaseEZX, LC Connector, 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-1GLHXLC	SFP-1GLHXLC-T	–	–	–	–	1	–	–	–
SFP-1GZXLC	SFP-1GZXLC-T	–	–	–	–	–	1	–	–
SFP-1GEZXLC	–	–	–	–	–	–	–	1	–
SFP-1GEZXLC-120	–	–	–	–	–	–	–	–	1

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

WDM-type (BiDi) SFP Modules

Availabe Models		Port Interface					
Standard Temperature (0 to 60°C)	Wide Temperature (-40 to 85°C)	1000BaseSFP, LC Connector, 10 km		1000BaseSFP, LC Connector, 20 km		1000BaseSFP, LC Connector, 40 km	
		TX 1310 nm, RX 1550 nm	TX 1550 nm, RX 1310 nm	TX 1310 nm, RX 1550 nm	TX 1550 nm, RX 1310 nm	TX 1310 nm, RX 1550 nm	TX 1550 nm, 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

The SFP-1G series modules can be used with the following products:
IM-2GSFP, EDS-611/619 series, EDS-G509 series, EDS-518A series, EDS-510A series, EDS-P510 series, ICS-G7826/G7828 series, ICS-G7526/G7528 series, IM-G7000-4GSFP, IKS-G6824 series, IKS-G6524 series, IKS-6526-2GTXSFP series, PM-7200-2G/4G series, EDS-G308 series, EDR-G903 series, IMC-101G series, PT-G7509

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 [a]	40 km [b]	80 km [b]
Saturation	0 dBm	-3 dBm	-3 dBm

a. 50/125 µm or 62.5/125 µm, 800 MHz * km @ 1300 nm multi-mode fiber optic cable
b. 9/125 µm 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

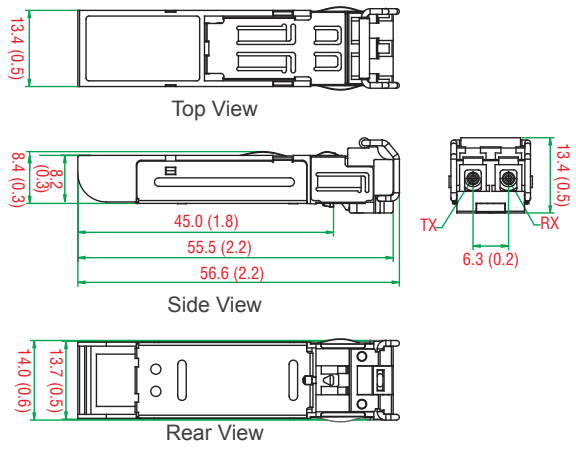
Safety: UL 60950-1, TÜV

Warranty

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

Dimensions

Unit: mm (inch)



Ordering Information

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

The SFP-1FE series modules can be used with the following products:
EDS-611/619 series, EDS-G509 series, EDS-G308-2SFP, EDS-P510 series, ICS-G7826/G7828 series, ICS-G7526/G7528 series, IM-G7000-4GSFP, IKS-G6824 series, IKS-G6524 series, IKS-6524-8SFP series, PM-7200-8SFP, EDR-G903 series

Package Checklist

- SFP-1FE module
- Warranty card

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