

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
- > 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, 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 1000BaseSX/LX/LHX/ZX/EZX
 IEEE 802.3x for Flow Control

Processing Type: Store and Forward

Flow Control: IEEE 802.3x flow control, back pressure flow control

Interface

Fiber Ports: 100/1000BaseSFP slot (EDS-G308 series only)

RJ45 Ports: 10/100/1000BaseT(X) auto negotiation speed, F/H duplex mode, and auto MDI/MDI-X connection

DIP Switches: One for port break alarm, one for Enable/Disable broadcast storm protection

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 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)

Regulatory Approvals

Safety: UL508 (Pending)

Hazardous Location: UL/cUL Class I, Division 2, Groups A, B, C, and D (Pending); ATEX Zone 2, Ex nC IIC (Pending)

EMI: FCC Part 15, CISPR (EN55022) class A

EMS:

EN61000-4-2 (ESD), level 3
 EN61000-4-3 (RS), level 3
 EN61000-4-4 (EFT), level 3
 EN61000-4-5 (Surge), level 3
 EN61000-4-6 (CS), level 3

Maritime: DNV (Pending), GL (Pending)
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 (meantime between failures)

Time: 325,000 hrs (EDS-G308 series)

Database: Telcordia (Bellcore), GB (EDS-G308 series)

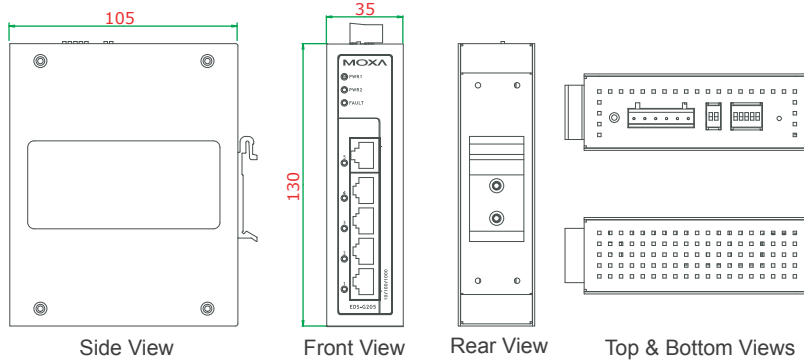
Warranty

Warranty Period: 5 years

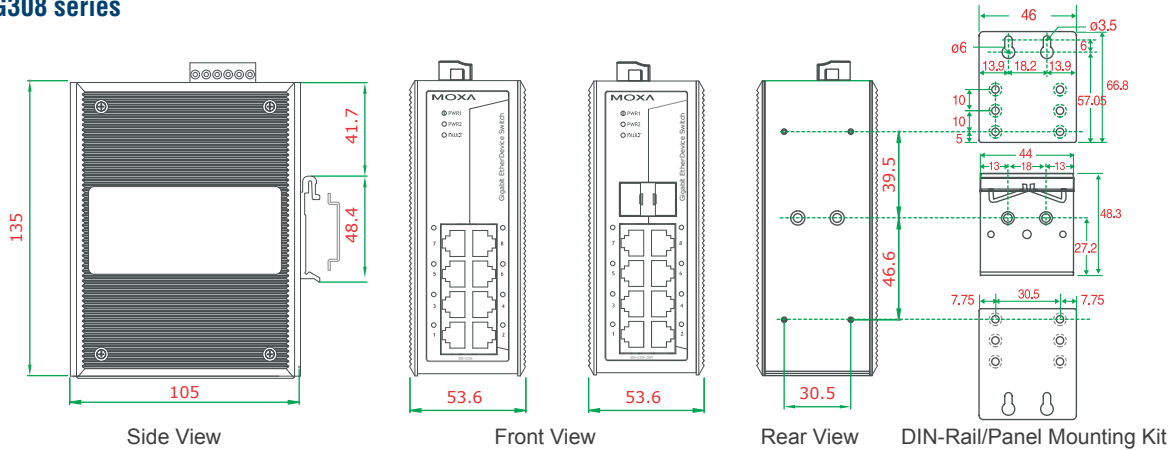
Details: See www.moxa.com/warranty

Dimensions (unit = mm)

EDS-G205



EDS-G308 series



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 10/1000BaseSFP*
EDS-G205	EDS-G205-T	5	---
EDS-G308	EDS-G308-T	8	---
EDS-G308-2SFP	EDS-G308-2SFP-T	6	2

Note: The EDS-G308-2SFP and EDS-G308-2SFP-T support up to 2 100/1000BaseSFP slots. See pages 3-45 and 3-47 for SFP-1G/1E 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-46: Wall mounting kit (EDS-G308 series only)

WK-30: Wall mounting kit (EDS-G205 series only)

RK-4U: 4U-high 19" rack mounting kit

SFP-1G Series

1G-port Gigabit Ethernet SFP modules



- > Compliant with IEEE 802.3z
- > Differential LVPECL inputs and outputs
- > Single 3.3 V power supply
- > TTL signal detect indicator
- > Hot pluggable
- > Class 1 laser product, complies with EN60825-1



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-10A	SFP-10B	SFP-20A	SFP-20B	SFP-40A	SFP-40B
Wave-length	850 nm	1310 nm	1310 nm	1310 nm	1310 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		-2 dBm		2 dBm	
Min. TX	-9.5 dBm	-9 dBm	-9.5 dBm	-8 dBm	-4 dBm	0 dBm	0 dBm	-9 dBm		-8 dBm		-3 dBm	
RX Sensitivity	-18 dBm	-19 dBm	-20 dBm	-23 dBm	-24 dBm	-24 dBm	-30 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	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	10 km ^c		20 km ^c		40 km ^c	
Saturation	0 dBm	-3 dBm	-3 dBm	-3 dBm	-3 dBm	-3 dBm	-3 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

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)

Regulatory Approvals

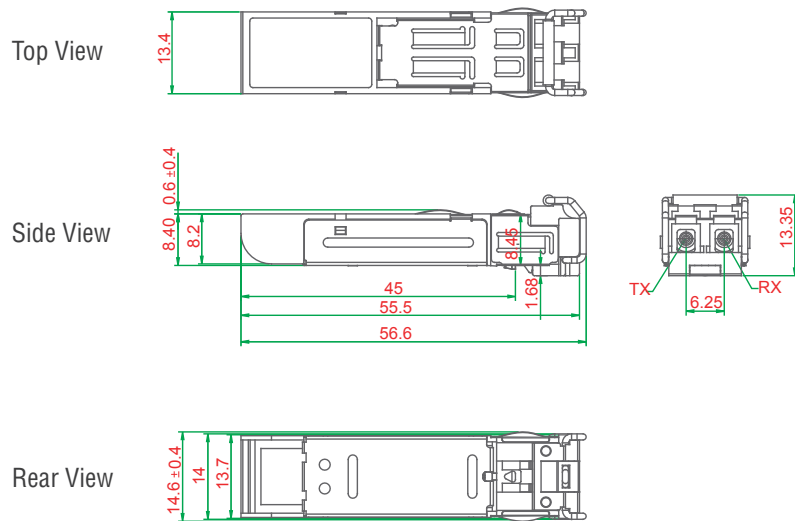
Safety: UL, TÜV

Warranty

Warranty Period: 3 years

Details: See www.moxa.com/warranty

Dimensions (unit = mm)



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	1000BaseEZ, LC Connector, 110 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-1GLHXL	SFP-1GLHXL-T	---	---	---	---	1	---	---
SFP-1GZXLC	SFP-1GZXLC-T	---	---	---	---	---	1	---
SFP-1GEZLC	---	---	---	---	---	---	---	1

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

WDM-type (BiDi) SFP Modules

Available 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

- EDS-728/828 series: IM-2GSFP series Gigabit Ethernet interface modules
- EDS-G509 series: 9G-port full Gigabit managed Ethernet switches
- EDS-518A series: 16+2G-port Gigabit managed Ethernet switches
- EDS-510A series: 7+3G-port Gigabit managed Ethernet switches
- EDS-P510 series: 7+3G-port Gigabit PoE managed Ethernet switches
- PT and IKS series: PM-7200-2G/4G series Gigabit Ethernet interface modules
- EDS-G308 series: 8G-port full Gigabit unmanaged Ethernet switches
- IMC-101G series: Industrial Gigabit media converters

SFP-1FE Series

1-port fast Ethernet SFP modules



- Single + 3.3 V power Supply
- Small Form Factor Pluggable MSA Compliant
- PECL Differential Inputs and Output
- TTL Signal Detect Indicator
- Compliant with SONET / SDH Standard
- LC Duplex Connector
- EEPROM with serial ID functionality
- Class 1 Laser International Safety Standard IEC 825 Compliant



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)

Regulatory Approvals

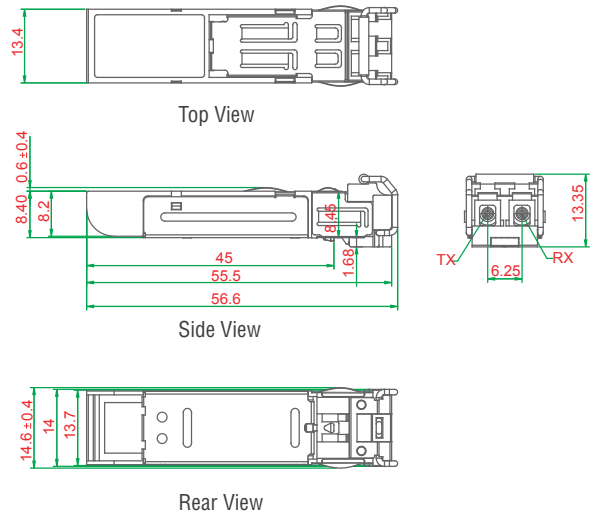
Safety: UL, TÜV

Warranty

Warranty Period: 3 years

Details: See www.moxa.com/warranty

Dimensions (unit = mm)



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-G509 series: 9G-port full Gigabit managed Ethernet switches

EDS-G308 series: 8G-port full Gigabit unmanaged Ethernet switches

EDS-P510 series: 7+3G-port Gigabit PoE managed Ethernet switches

PT and IKS series: PM-7200-8SFP fast Ethernet interface modules