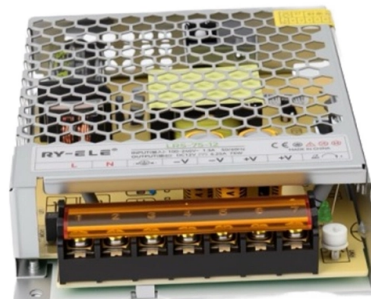


Optical Module-SFP-GE-Single Mode



Overview

GE eSFP Optical Modules This document provides an overall description of the CE12800 series switches hardware, helping you obtain detailed information Huawei.

Key Takeaways

The SFP-GE-Single Mode is a small form-factor pluggable Gigabit Ethernet optical module designed for single-mode fiber, supporting distances up to 10 km and often requiring paired modules for bidirectional operation.

The SFP-GE-Single Mode module is a Gigabit Ethernet (1 Gbps) optical transceiver that connects network devices such as switches and routers over single-mode fiber (SMF). It is hot-swappable, allowing installation or replacement without powering down the device, and typically uses an LC connector for full-duplex communication.

Key Specifications

- Fiber Type: Single-mode fiber (SMF)
- Wavelength: Commonly 1310 nm for standard LX modules; bidirectional (BIDI) modules use paired wavelengths, e.g., 1310 nm transmit / 1490 nm receive
- Transmission Distance: Up to 10 km for standard single-mode SFPs; some extended-range modules can reach 40–70 km depending on the model
- Interface: LC duplex connector for standard modules; single-fiber BIDI modules use one fiber for both transmit and receive
- Hot-Swappable: Yes, supports easy replacement without network downtime

- Digital Optical Monitoring (DOM): Some modules support DOM to monitor real-time parameters such as optical output/input power, temperature, and voltage
- Bidirectional (BIDI) Operation

Single-fiber BIDI SFP modules must be used in pairs, with one module transmitting at one wavelength and the other receiving at the complementary wavelength. For example, SFP-GE-LX-SM1310-BIDI must be paired with SFP-GE-LX-SM1490-BIDI to establish a full-duplex link over a single fiber strand .

Compatibility and Deployment

- Compatible with a wide range of switches and routers that support SFP ports
- Can interoperate with other 1G SFPs as long as they follow the 1000BASE-LX/LH or 1000BASE-BX10 standards
- For multimode fiber connections, a different SFP type (e.g., 1000BASE-SX) is required, as single-mode SFPs are optimized for long-distance SMF links
- When using legacy multimode fiber with LX modules, a mode-conditioning patch cable may be required to prevent signal distortion

Summary

The SFP-GE-Single Mode module is ideal for long-distance Gigabit Ethernet connections over single-mode fiber, offering flexibility, hot-swappable convenience, and optional monitoring features. For single-fiber BIDI modules, proper pairing is essential to ensure full-duplex communication. These modules are widely used in enterprise and carrier networks for reliable, high-speed optical connectivity .

Article Content

GE eSFP Optical Modules

This document provides an overall description of the CE12800 series switches hardware, helping you obtain detailed information

1.25 Gbit/s SFP/eSFP Optical Module

You can use different levels of 1.25 Gbit/s SFP/eSFP optical modules with GE interfaces and 10 GE interfaces. The

Cisco SFP Modules for Gigabit Ethernet Applications Data Sheet

This data sheet describes the benefits, specifications, and ordering information for the Cisco SFP Modules for Gigabit

Optic Modules Datasheet

4 Optic Modules Data Sheet ... SFP (form factor) = small form-factor pluggable
transceiver SMF (media) = single-mode fiber-optic

Huawei Optical Transceiver eSFP GE Single-Mode Module

The Huawei eSFP GE Single-Mode Module 1310 nm 10 km LC delivers reliable 1 Gbps fiber connectivity for long-distance networks.

10G SFP+ Module BiDi Fiber Optic Transceiver LC Simplex

The SFP+ BiDi module features a highly reliable 1330nm DFB transmitter and 1270nm PIN photo-detector into LC Simplex optical

10GE SFP+ Optical Modules

Guide to Using Pluggable Modules Pluggable Module Adaptation Solution Pluggable
Module Specifications FE SFP/eSFP Optical

Cisco Fast Ethernet SFP Modules

Cisco Fast Ethernet SFP Modules Overview Cisco offers a range of Fast Ethernet SFP
Interface Converters. The product portfolio

Understanding Single-mode and Multi-mode SFP Optical Modules

A SFP single-mode optical modules and SFP multi-mode optical modules are
incompatible. If you mix SFP single-mode optical

JT-1G-SFP-DD-LR

JTOPTICS® 1Gb/s transceiver module supports up to 20km link lengths over LC
duplex SMF fiber. Featuring low power

SFP-GE-LX-SM1310 (02315200)

This document provides specifications and details about the SFP-GE-LX-SM1310
optical module for Huawei devices.

Optical Modules for Huawei S Series Switches

A multi-mode optical module cannot use a single-mode optical fiber. This is because a
single-mode optical fiber is thin and may

SFP-GE-CS-SM 1.25Gbps 1310nm Single-mode Simplex SC fiber SFP

1.25Gbps 1310nm Single-mode Simplex SC fiber SFP Transceiver Compliant with
SFF-8472 and DDM Function Small Form Factor

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This document is for preliminary research. Verify specifications against current standards, product documentation and project requirements.

