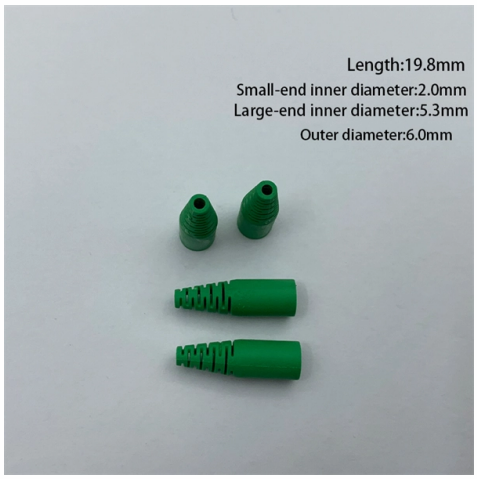
Fiber Optic Transceiver Single-Mode Single-Fiber Gigabit



Overview

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

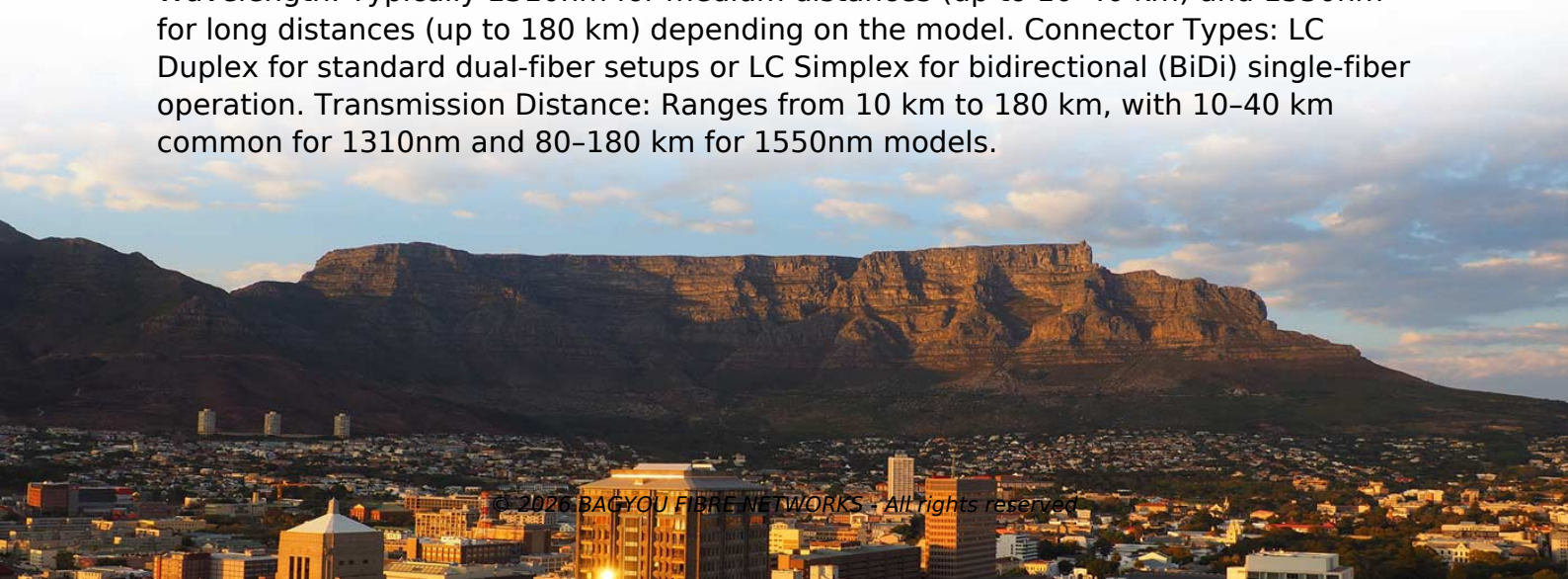
Key Takeaways

Single-mode, single-fiber gigabit SFP transceivers provide high-speed, long-distance optical connectivity using a single strand of fiber, ideal for enterprise, telecom, and industrial networks. OverviewSingle-mode, single-fiber SFP transceivers are designed to transmit and receive data over one strand of single-mode fiber (SMF) by using different wavelengths for upstream and downstream signals. They support Gigabit Ethernet speeds (1 Gbps) and are widely compatible with networking devices from Cisco, Antaira, Intellinet, and other MSA-compliant hardware.

These modules are hot-pluggable, allowing installation or replacement without powering down the network equipment.

Key Specifications

Wavelength: Typically 1310nm for medium distances (up to 10–40 km) and 1550nm for long distances (up to 180 km) depending on the model. Connector Types: LC Duplex for standard dual-fiber setups or LC Simplex for bidirectional (BiDi) single-fiber operation. Transmission Distance: Ranges from 10 km to 180 km, with 10–40 km common for 1310nm and 80–180 km for 1550nm models.



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Power Supply: Operates on +3. 3V, with industrial temperature models supporting -40°C to 85°C for harsh environments. Monitoring: Some modules support Digital Optical Monitoring (DOM) to track optical power, temperature, and voltage in real time.

AdvantagesLong-Distance Connectivity: Ideal for connecting remote switches, routers, or servers across large campuses or telecom networks.

Cost-

Effective Fiber Usage: BiDi models allow bidirectional communication over a single fiber, reducing cabling costs. High Reliability: Metal housing and robust design ensure durability and EMI protection, suitable for industrial applications. Ease of Integration: Compatible with major networking brands and MSA-compliant devices, ensuring plug-and-play functionality.

Use Cases

Enterprise Networks: Linking data centers or campus buildings over long distances. Telecom Infrastructure: FTTx deployments and metro networks using single-fiber connections. Industrial Applications: Harsh environments requiring extended temperature ranges and reliable uptime.

Example Models

Cisco GLC-BX40-D-I / GLC-BX40-U-I: Single-fiber, single-mode SFPs with up to 40 km range.

HM

S GSFIBER-SFP-10K: 1310nm, 10 km single-mode SFP for Gigabit Ethernet. Antaira SFP-S10: 1310nm, 10 km single-mode, industrial-grade SFP with extended temperature support.

Intellinet SF

P Modules: MSA-compliant, compatible with Cisco gear, compact metal housing for EMI protection. These transceivers are ideal for network upgrades, expansions, and high-speed communication where long-distance, reliable, and cost-effective fiber connectivity is required.

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Article Content

Cisco SFP Modules for Gigabit Ethernet Applications

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

SFP Transceiver

Utilizing LC connectors and operating at a 1310nm wavelength, it enables high-speed data transmission over single-mode fiber for distances up to 10 kilometers. This module provides a reliable long-reach

Gigabit Fiber SFP Optical Transceiver Module

Fiber Optic TransceiverSingle Mode FiberSingle Mode Fiber SFPFiber Optic Single and Multi ModeFiber Optical TransceiverFiber Optic Media Converter Single ModeSingle Mode Fiber Optic ModuleSingle Mode Fiber RepeaterSingle Mode 1 Gig TransceiverGigabit Optical Fiber Transceiver Single-mode Single-fiber Fiber Media ...100m/gigabit 1SFP+1RJ45 Optical Fiber Transceiver Manufacturer Single ...1.25G Gigabit Ethernet sfp optical transceiver module Bidi Singlemode ...Single Mode 1.25G 20km LC Fiber Optical Transceiver 1310nm1.25G SFP Gigabit Fiber Transceiver Single ModeGigabit Optical Fiber Transceiver 20KM 1310nm 1550nm HTB-GS-03A/B .. ber Transceiver Tx1310nm/Rx1550nm Single Fiber Single Mode RJ45 Port ...Optical Fiber Transceiver 25KM 100 Gigabit Single Mode Single Fiber ...S07897cc7939f4c51ab9f3de18a1b50f0z.jpgRj45 Gigabit Fiber Optic Transceiver Sfp Single-Mode Single Fiber 1.25g ...Optical Fiber Transceiver 25KM 100 Gigabit Single Mode Single Fiber ...1.25G SFP Gigabit Fiber Transceiver Single ModeGigabit Optical Fiber Transceiver 20KM 1310nm 1550nm HTB-GS-03A/B ...HTB-GS-03 AB Gigabit Transceiver Single Mode Singl... – VicedealSee all imagesFS

1G SFP Transceivers | Mini-GBIC SFP Modules - FS

FS gigabit ethernet transceiver solutions provide fibre or copper options including 1000BASE-SX, 1000BASE-LX/LH, 1000BASE-T etc., from 100m to 160km, for

F-SFP1G-SM

1GBASE-LX/LH SFP 1310NM 20KM DOM TRANSCEIVER — SINGLE MODE FIBER – 1EA The F-SFP1G-SM single-mode transceivers are small form factor pluggable modules for bi-directional serial

Industrial Gigabit Fiber SFP Optical Transceiver

Compatibility in your network is everything, and this industrial SFP Transceiver Module delivers. Use it with any Intellinet SFP equipped network switch or any

Gigabit SFP Module: A Complete Guide to 1G SFP Transceivers

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Learn what a gigabit SFP module is, how it works, main types, key specifications, and common use cases to choose the right 1G SFP for your network.

1G SFP LX 1310nm 20km Single mode Transceiver

Featuring a built-in Semtec chip and reliable FP laser / PIN receiver, the SFP module delivers low power consumption and stable optical links for 1G single

Fiber Optical Transceiver Module Manufacturer,

10G Transceiver BIDI SFP+ designed for bi-directional 10G serial optical data communications. CWDM SFP+ operating at 1270-1610nm CWDM wavelengths

SFP Module Buying Guide: How to Choose the Right

SFP Module Buying Guide: How to Choose the Right Transceiver Everything you need to know before buying an SFP module — compatibility,

Singlemode 1310 nm Fiber Optic Transceivers – Mouser

Singlemode 1310 nm Fiber Optic Transceivers are available at Mouser Electronics. Mouser offers inventory, pricing, & datasheets for Singlemode 1310 nm Fiber Optic Transceivers.

HTF DWDM equipment,OTN Solution,QSFP28 OSFP

HTFuture offers industry-leading fiber optic products and WDM system solutions with global recognition for excellence and innovation.

Xi''an FiberHome OL100CL 100Mbps/Gigabit Series Transceiver

Xi''an FiberHome OL100CL 100Mbps/Gigabit Series Transceiver OL100CL series 100Mbps fiber optic transceiver It is an independent, highly reliable, and low-cost Ethernet optical port converter

SFP modules – transceivers for 1/2/4G fibre channel

SFP transceivers are valued for their flexibility, low power consumption and ability to support both single-mode and multimode fiber, making them ideal for short-range

Cisco Compatible SFP Transceiver Fiber Optic Equipment 1.25G Gigabit ...

Cisco Compatible SFP Transceiver Fiber Optic Equipment 1.25G Gigabit BiDi Single Fiber 20KM SC Port Optical Module for Switch

price+of+industrial+fiber+optic+switches+in+somalia

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The FOA Reference For Fiber Optics

Most systems use a "transceiver" which includes both transmission and receiver in a single module. The transmitter takes an electrical input and converts it to an optical output from a laser diode or LED.

10 Gigabit Ethernet

Optical fiber A Foundry Networks router with 10 Gigabit Ethernet optical interfaces (XFP transceiver). The yellow cables are single-mode duplex fiber optic connections. There are two basic types of

Fiber Optic Networking Products in Ghana

1.25G SC Single Mode WDM SFP transceiver module used for fiber optic networking. Data Rate: 1.25...

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This video was associated with the source search result. Verify technical details against current product documentation and project requirements.

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

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