Huijue Single-Mode Gigabit Optical Module Connection

Overview

Intellinet Network Solutions 10GBase-LR Fiber SFP+ Optical Transceiver Module, model 507479, is the right choice when it comes to connecting two buildings at 10 GbE speeds with single mode fiber.

Key Takeaways

A Huijue single-mode gigabit optical module connects devices over single-mode fiber using LC connectors, typically operating at 1310 nm for distances up to 10 km or more, depending on the module specifications. Key Connection PrinciplesSingle-Mode Fiber (SMF): Huijue gigabit optical modules are designed for single-mode fiber, which uses a small core (typically 8–10 µm) to transmit light over long distances with minimal signal loss. This is ideal for campus, data center, or inter-building connections.

Wavelength and Distance: Most single-mode gigabit SFP modules operate at 1310 nm, supporting distances from 10 km up to 80 km depending on the module type. Ensure the module's rated distance matches your network requirements. Connectors: These modules typically use LC duplex connectors, which provide reliable, low-loss connections.

Proper alignment and cleanliness of fiber connectors are critical to maintain signal integrity.

SF

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P Form Factor: The module is hot-swappable, allowing installation without powering down the switch or network device. It is compatible with any MSA-compliant SFP port, including Huijue, Cisco, or other vendor switches. Digital Diagnostics Monitoring (DDM/DOM): Many modules support real-time monitoring of optical power, temperature, and voltage, which helps in troubleshooting and maintaining optimal performance.

Installation Tips

Check Compatibility: Verify that the Huijue SFP module is compatible with your switch or router's SFP port. Use Proper Fiber: Use single-mode fiber with LC connectors. Avoid bending the fiber sharply to prevent signal loss.

Clean Connectors: Always clean the fiber ends before insertion to prevent contamination and signal degradation. Insert Module: Plug the SFP module into the switch port until it clicks securely. Connect Fiber: Attach the LC duplex fiber patch cable, ensuring transmit (TX) and receive (RX) are correctly aligned.

Verify Link: Check link lights on the switch and, if available, use DDM to confirm optical power levels are within specification.

Troubleshooting

No Link: Ensure TX/RX alignment is correct and fiber is not damaged. High Loss: Clean connectors and check for excessive bends or long distances beyond module specifications. Compatibility Issues: Confirm the SFP module is recognized by the switch; some switches require vendor-specific firmware or modules.

By following these guidelines, a Huijue single-mode gigabit optical module can provide a stable, long-distance fiber connection suitable for enterprise or campus networks.

Article Content

10 Gigabit Fiber SFP+ Optical Transceiver Module

Intellinet Network Solutions 10GBase-LR Fiber SFP+ Optical Transceiver Module, model 507479, is the right choice when it comes to connecting two buildings at 10 GbE speeds with single mode fiber.

LC Single-Mode Optical Module Huijue

This guide will explain their functions, discuss the role of single-mode LC connectors in modern fiber optic systems, and present the logic for their adoption on a broader scale.

Huijue Optical Module Single Fiber

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Our transceiver modules are available for commercial and industrial applications, supporting varying distances from 500m to 160km, depending on multimode or single-mode fiber.

10GE SFP+ Optical Modules

Single-fiber bidirectional (BIDI) optical modules must be used in pairs. For example, SFP-10G-BXU1 must be used with SFP-10G-BXD1.

Huijue Single-Core Optical Module Insertion Method

If an optical module is installed in a running switch, you can run the display transceiver command to view parameters of the optical module, including the center wavelength, transmission distance, fiber types

Optic Modules Datasheet

Data Sheet datasheet is intended to guide the user through the various options available when choosing an optic module for a given platform depending on the architecture.

Datasheet Archive: HUIJUE GIGABIT FIBER OPTIC MODULE

View results and find huijue gigabit fiber optic module datasheets and circuit and application notes in pdf format.

XG-SFP-LR-SM1310 10GBASE-LR SFP+ 1310-nm 10-km DOM

The XG-SFP-LR-SM1310 is aligned to IEEE 10GBASE-LR optical specifications and supports a link length of up to 10 kilometers over a single-mode fiber (SMF) with an LC connector.

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These installation instructions provide overview and specification information for small form-factor pluggable (SFP/ SFP+/SFP28) modules, as well as instructions for installing and removing the modules.

1 Gigabit Singlemode SFP Fiber Optic Transceivers

Our 1 Gigabit Singlemode SFP Transceivers offer high-performance, reliable connectivity for singlemode fiber optic networks. These transceivers are

Installation and Maintenance Guide for Gigabit Optical Modules and 10 ...

As an essential component of network communication, optical modules have been widely used in various scenarios such as data centers, enterprise LANs, and WANs. An optical module is

Fiber to Ethernet Media Converter | Copper to Fiber Converters

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Fiber to Ethernet Converters use a copper transceiver to transform the signal from a UTP / RJ45 Ethernet link to one that can be used by a fiber optic transceiver. These Media Converters are used

Dahua GSFP-1310R-20-SMF Gigabit Optical Module, 1-Fibre, Singlemode

Dahua GSFP-1310R-20-SMF Gigabit Optical Module, 1-Fibre, Singlemode, 20km Series Overview Industrial Optical Module Series is a hot-pluggable device with a unique sturdy design. Developed to

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

SFP Modules vs Fixed-Port Transceivers Unlike fixed-port transceivers, which are permanently integrated into network hardware, gigabit SFP modules are interchangeable and hot-pluggable:

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

Huijue Single-Core Optical Module Insertion Method

New, single-mode, multi-fiber, expanded beam, passive optical In order to obtain a low, stable, insertion loss, the glass fiber tip mated pairs must come into physical contact with each other.

SFP Single Mode LC Module (20km)

TRENDnet''s SFP Single Mode LC Module, model TEG-MGBS20, is compatible with standard SFP slots found on network switches and fiber media converters. Each TEG-MGBS20 single mode fiber SFP is

Gigabit Ethernet Network Modules

The Gigabit Ethernet network module provides single-port Gigabit Ethernet connectivity through an installed Gigabit interface converter (GBIC). The GBIC determines the type of

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