

Article Overview

Huawei HGN optical modules are high-performance, long-distance transceivers designed for reliable Gigabit Ethernet and data center connectivity.

Overview

HGN modules are Huawei original optical transceivers engineered for long-haul data transmission over single-mode fiber (SMF). They are widely used in enterprise networks, telecom backbones, and remote connectivity deployments. These modules support hot-pluggable SFP or SFP+ interfaces, enabling flexible installation and maintenance without disrupting network operations .

Key Features

- o Transmission Distance and Wavelength: HGN modules operate at wavelengths such as 1490nm for GE 40KM SFP modules and 1310nm for 10G 10KM SFP+ modules, supporting distances from 10 km to 40 km depending on the model .
- o High Reliability: Huawei incorporates channel loss resistance and contamination detection technologies, improving module reliability by up to 10x and ensuring stable long-term operation .
- o Digital Diagnostic Monitoring (DDM): Many HGN modules include DDM capabilities, allowing real-time monitoring of optical power, temperature, and other operational parameters to maintain network performance .
- o Standards Compliance: HGN modules meet industry standards such as IEEE 802.3z and SFF-8472, ensuring broad compatibility with networking equipment .

Applications

- o Enterprise Networks: Ideal for connecting buildings or campuses over long distances.
- o Telecom Backbones: Supports high-speed, long-range data transmission for telecom operators.
- o Data Center Interconnects: Huawei's HGN modules are part of the StarryLink series, providing ultra-reliable, secure, and long-distance connections for data centers, with features like PHYSEC encryption and precise fault locating .

Available Models

- o GE 40KM SFP/OSG040001 HGN: 1 Gbps, 1490nm, 40 km transmission, LC duplex interface .
- o OSG040N02 GE 40KM HGN: Designed for Huawei OLT uplinks, supporting 40 km over SMF .
- o 10G 10KM SFP+/OSX010000 HGN: 10 Gbps, 1310nm, 10 km transmission, suitable for short-range high-speed links .

Summary

Huawei HGN optical modules provide high-speed, long-distance, and highly reliable connectivity for enterprise, telecom, and data center networks. Their combination of long transmission distances, DDM monitoring, and advanced reliability features makes them a robust choice for modern network infrastructures .

This document explains optical modules, their types, and applications, providing a comprehensive understanding of their functionality

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

Experience enhanced network connectivity and improved data transmission with

We will test each batch of optical modules and truthfully inform customers the test result if optical module

Fully compliant with IEEE 802.3z and SFP MSA standards, this hot-swappable SFP module offers robust Digital Diagnostics

Optical Module: Typical Optical Module Troubleshooting Procedure Check the model of the faulty optical module. If it is not a Huawei

The OptiXstar product series extends optical connectivity to every home, enterprise, and campus, bringing

Installing an Optical Module Context This section describes how to install an optical module. The method used to install a copper

Product Description Huawei original 10G 10KM SFP+/OSX010000 HGN 10G 1310nm 10km SFP+ optical transceiver Experience

Optical modules are encapsulated in different modes to provide different structures. Huawei routers support optical modules of the

Check whether an optical module is a bogus one. An optical module delivered by Huawei is uniquely identified by an SN. If two or

Optical modules are important devices in fiber optic communication systems. Huawei Optical Module is manufactured by Huawei



Huawei optical module HGN

This top-of-the-line product, directly from Huawei, guarantees superior quality and reliability. Operating at a wavelength of 1310nm, it

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

Huawei offers a comprehensive portfolio of pluggable StarryLink optical modules for data center networks, with various models

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