

Huawei Gigabit Optical-to-Electronic Port Module Self-operated



Overview

Huawei EA5801E-GP08-GP16-GP04-Optical Access Huawei OptiXaccess EA5801E is a box-shaped Optical Line Terminal (OLT) with Gigabit Passive Optical 10GE SFP+.

Key Takeaways

Huawei Gigabit O/E port modules provide reliable 1Gbps connectivity via optical or RJ45 interfaces, supporting various transmission distances and network standards. Overview

Huawei offers a range of Gigabit Ethernet (GE) optical and electrical SFP modules designed for self-operated networks, enabling flexible deployment in switches, routers, and access devices. These modules convert optical signals to electrical signals (and vice versa), supporting high-speed data transmission over fiber or copper cabling.

Key Types and Specifications

- Electrical (Copper) Modules
- Model: SFP-GE-T / OEGD01N01
- Interface: RJ45, 1000BASE-T
- Transmission Distance: Up to 100 meters over Cat5e/Cat6 cables
- Features: Auto-negotiation, high compatibility with Huawei switches (S5700, S6700, S9303)

- Use Case: Short-range connections in corporate networks, data centers, or campus environments

- Optical Modules

- Single-mode (SM) Modules: e.g., SFP-GE-LX-SM1310, S-SFP-GE-LH40-SM1310

- Wavelength: 1310nm

- Distance: 10-40 km

- Connector: LC

- Application: Long-distance fiber links

- Multi-mode (MM) Modules: e.g., eSFP-GE-SX-MM850

- Wavelength: 850nm

- Distance: 0.55 km

- Connector: LC

- Application: Short-distance fiber connections within buildings or data centers

- Bidirectional (BIDI) Modules: e.g., SFP-GE-LX-SM1310-BIDI / SFP-GE-LX-SM1490-BIDI

- Feature: Single-fiber bidirectional transmission, must be used in pairs

- Distance: 10 km

- Application: Reduces fiber usage in point-to-point links

Compatibility and Deployment

Huawei Gigabit O/E modules are tested for compatibility with Huawei switches and optical boards, ensuring reliable link establishment, PING connectivity, and proper operation without anomalies . They are suitable for:

- Enterprise networks requiring flexible uplinks

- Data centers needing high-density, scalable connections

- Campus networks with mixed fiber and copper infrastructure

Additional Features

- Digital Diagnostic Monitoring (DDM): Some optical modules support real-time monitoring of temperature, voltage, and optical power.

- Energy Efficiency: Certain boards and modules support automatic power-off in high-temperature conditions to conserve energy .

- Standards Compliance: Modules comply with 1000BASE-T, 1000BASE-SX, 1000BASE-LX, and other IEEE standards for Gigabit Ethernet.

Summary

Huawei self-operated Gigabit O/E port modules provide versatile, reliable, and standards-compliant solutions for both copper and fiber networks. Electrical modules like SFP-GE-T or OEGD01N01 are ideal for short-range RJ45 connections, while optical modules, including single-mode, multi-mode, and BIDI types, support distances from hundreds of meters to 100 km. Proper selection ensures optimal network performance, compatibility, and efficient fiber utilization .

Article Content

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.

Optical Modules for Huawei S Series Switches

To determine whether optical modules delivered for Huawei switches before July 1, 2013 are certified ones, contact Huawei technical

Huawei Original Electrical Port Module SFP-GE-T (Model: 02313GCE)

Huawei offers four models of original electrical port SFP-GE-T modules on its official website. Moduletek Laboratory

Huawei Optical Module Single Fiber Self-Operated

Overview The Huawei S-SFP-GE-LH80-SM1550 is a high-performance, compact 1Gbps single-mode fiber optic transceiver module

01-11 PLUGGABLE MODULES FOR INTERFACES

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10GE SFP+ Optical Modules

Fan Modules Installing a Power Surge Protector Pluggable Modules for Ports Understanding Optical Modules Understanding Copper

1 Gbit/s SFP Optical/Electrical Modules

This page provides technical details and support information about 1 Gbit/s SFP optical/electrical modules from Huawei.

Understanding Pluggable Optical Modules

For a 50GBase-ER 400GBase-ER (40 km) long-distance optical module, the receive optical power damage threshold is lower than

Huawei OptiXstar P613E-E ONU

Huawei OptiXstar P613E-E is an Optical Network Unit (ONU) designed for enterprise campus and video backhaul scenarios. It

Optical/Electrical Modules

Optical/Electrical Modules This chapter describes hardware information for optical/electrical modules of the USG6000E.

Huawei OptiXstar P871E ONU

A panel-type Optical Network Unit (ONU) that can be easily installed in 86-type electrical boxes on enterprise campuses, Huawei

10 Gbit/s SFP+ Optical Modules

10 Gbit/s SFP+ optical modules apply to 10 GE optical ports. The wavelength can be 850 nm, 1310 nm, or 1550 nm, and the

Types of Optical Modules

Wavelength division multiplexing modules differ from other optical modules in center wavelengths. A common optical module has a

Fundamentals of an Optical Module

Fundamentals of an Optical Module As an important part of fiber-optic communication, an optical module is a photoelectric converter

Installing Optical Transceivers and Connecting Optical Fibers

Installing Optical Transceivers and Connecting Optical Fibers This section describes how to install optical transceivers on the SFP or

25GE SFP28 Optical Modules

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

Checking the Optical Module

Use an optical power meter to test the optical power attenuation of each part of the link and fix the abnormal part. Change the optical

Huawei GPON SFP Optical Modules

This document summarizes the specifications of three Huawei GPON optical modules. The modules operate at transmission

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

