

What types of Huawei PON optical modules are there



Overview

Huawei PON SFP Modules | GPON XG-PON XGS-PON & 50G-PON With options ranging from Class B+ to Class D and advanced XG-PON Combo SFP+ modules, Huawei deliver.

Key Takeaways

Huawei PON optical modules include GPON, XG-PON, XGS-PON, and combo modules, each designed for specific transmission rates and OLT board compatibility. Main Types of Huawei PON Modules

- GPON Optical Module
- Provides Gigabit-capable passive optical network (GPON) access service.
- Typically connected via SC optical fiber.
- Compatible with Huawei MA5600T and MA5800 series boards (e.g., GPHF, GPSF, GPLF, GPUF).
- Available in optical power classes B+, C+, and C++, with increasing performance:
- B+: 1.5~5 dBm transmit power, -28 dBm receiver sensitivity
- C+: 3~7 dBm, -32 dBm
- C++: 6~10 dBm, -35 dBm .

- XG-PON Optical Module
- Supports 10-Gigabit-capable passive optical network (XG-PON) access service.
- Connected via SC fiber and compatible with MA5800 series boards (e.g., XGHD, XGLD, XGSF, XGLF).
- Provides higher bandwidth for demanding applications .
- XGS-PON Optical Module
- Provides 10-Gigabit symmetric PON (XGS-PON) service, supporting equal upstream and downstream rates.
- Compatible with MA5800 series boards (e.g., TWED).
- Often uses XFP form factor for high-speed transmission .
- Combo Modules (XG-PON & GPON, XGS-PON & GPON)
- Allow a single OLT board to support multiple PON standards simultaneously.
- Useful for gradual network upgrades or mixed-service environments .

Form Factors and Features

- Huawei PON modules are typically hot-swappable and use SFP, SFP+, or XFP form factors depending on speed and application .
- eSFP modules support monitoring of voltage, temperature, bias current, transmit and receive optical power, enhancing network management .
- Modules differ in optical power, receiver sensitivity, and EMI tolerance, which affects deployment distance and reliability .

Summary

Huawei PON optical modules are designed to meet diverse network requirements:

- GPON for standard gigabit access
 - XG-PON for 10 Gbps downstream
 - XGS-PON for symmetric 10 Gbps
 - Combo modules for flexible multi-standard support
- Choosing the right module depends on OLT board compatibility, required bandwidth, and optical power class to ensure optimal network performance .

Article Content

Optical Modules for Huawei S Series Switches

A switch must use optical or copper modules that have been certified for use on Huawei switches. Non-certified optical or copper

What Is Passive Optical Networking (PON)? GPON vs. EPON

Passive Optical Network (PON) is a point-to-multipoint optical access technology. Ethernet PON (EPON) and gigabit

Optical Modules in General-Purpose Computing Scenarios

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

What Is an Optical Module and Its FAQs (V200)

What Is an Optical Module and Its FAQs (V200) Describes what an optical module is and FAQs, including the fundamentals,

Types of Optical Modules

Optical modules are available in various types to meet diversified requirements. Classified by transmission rates Depending on

Types of Optical Modules

Huawei S series devices support optical modules of the following encapsulation types: CFP, QSFP+, QSFP28, XFP, SFP, eSFP,

Introduction for Huawei GPON Optical Module

Introduction for Huawei GPON Optical Module PON modules are the core of the PON boards, different modules have different optical

PON Interface Configuration Commands

The optical-module threshold temperature command sets the lower and upper alarm thresholds of the temperature for the optical

Understanding Optical Modules

On an optical network, a sender needs to convert electrical signals into optical signals before sending them to a receiver, and the

Huawei XG-PON Optical Module-N2a Best Price At Telecomate

Buy Huawei XG-PON Optical Module-N2a SFP+, one-fiber bidirectional optical module, 4dBm-8dBm, -29.5dBm, SC, -9dBm, 8.2dB,

Overview of PON Interfaces

A PON network consists of only passive optical components. This technology has the following advantages: Prevents

Types of Optical Modules

Classified by physical layer standards Different physical layer standards are defined to allow data transmission in different modes.

Huawei OptiXstar S800E

Huawei OptiXstar S800E is a miniature Optical Network Unit (ONU) that can be inserted into the Small Form-Factor Pluggable (SFP)

Huawei Class D Optical Module: Why it Matters?

In PON access networks, the optical modules are key components. For years, Class B+ and Class C+ were the most common.

Understanding Pluggable Optical Modules

Optical modules are available in various types to meet diversified requirements. Classified by transmission rates Currently, the

Types of Optical Modules

QSFP+ optical modules support MPO fiber connectors and are larger than SFP+ optical modules. Classified by physical layer

Huawei GPON SFP B+ C+ C++ Introduction and Comparison

It converts electrical signals into optical signals over fiber optic cables in the GPON network. Huawei GPON module

Optical Access

It provides two upstream optical ports and 16 downstream PoF ports to supply power and transmit optical signals to ONUs over PoF

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