

OLT optical module transmits optical power 32dB



Overview

GPON OLT SFP Class C+ Transceiver | 2.5G/1.25G | 32dB Budget
Designed for Optical Line Terminals (OLT), this module operates under the ITU-T G.984.2 standard.

Key Takeaways

A GPON OLT SFP Class C+ transceiver with a 32dB optical budget supports long-distance FTTH deployments and high split ratios, providing robust 2.5G/1.25G connectivity.

- Optical Budget: 32dB, which is higher than Class B+ modules (~28dB), allowing extended reach and higher split ratios .
- Data Rates: 2.488 Gbps downstream and 1.244 Gbps upstream, suitable for GPON networks .
- Wavelengths: 1490nm for downstream transmission (DFB laser) and 1310nm for upstream reception (APD receiver), .
- Split Ratio Support: Reliable operation for 1:64 split ratios, enabling more subscribers per OLT port .
- Distance Coverage: Can support up to 20 km under standard fiber conditions, with additional headroom for older cabling or higher insertion loss .
- Standards Compliance: Fully compliant with ITU-T G.984.2 and SFP MSA standards, ensuring interoperability .

- **Diagnostics:** Supports Digital Diagnostic Monitoring (DDM) per SFF-8472 for real-time health checks .

Practical Implications

A 32dB optical budget means the module can overcome higher fiber losses, including those from long distances, multiple splitters, or aging fiber. This makes it ideal for FTTH deployments in urban and suburban areas where fiber runs may exceed 20 km or require high subscriber density. The enhanced optical power also improves signal reliability and network stability, reducing the risk of service degradation.

Deployment Considerations

- **Fiber Type:** Single-mode fiber is typically used for GPON networks.
- **Split Ratio Planning:** Higher split ratios (e.g., 1:64) require careful calculation of optical loss to ensure all ONUs receive sufficient signal.
- **Environmental Factors:** Temperature, connector quality, and splicing losses can affect the effective optical budget .
- **OLT Compatibility:** Ensure the transceiver firmware and TDMA burst timing are compatible with the OLT hardware to maintain proper upstream synchronization . In summary, a 32dB Class C+ OLT optical module provides a robust solution for high-capacity GPON networks, supporting long distances, high split ratios, and reliable FTTH service delivery .

Article Content

GPON OLT SFP Class C+ Transceiver | 2.5G/1.25G | 32dB Budget

Designed for Optical Line Terminals (OLT), this module operates under the ITU-T G.984.2 standard, delivering asymmetric data

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Upgrade your fiber network capacity with the GPON OLT SFP Class C+ Transceiver. Delivering an optimized 32dB optical budget,

ZTE GPON OLT Class C+ Modules: Performance & Deployment Guide

It operates at a downstream wavelength of 1490nm and an upstream wavelength of 1310nm. The "C+" designation signifies a "High

GPON OLT SFP Class C+ 20km DDM SC SMF Optical

The GPON OLT SFP transceiver provides an asymmetric 1.244Gbps upstream and 2.488Gbps downstream, reaching a link up to

GPON OLT C++ Optical Module Spec Sheet

Features & Benefits Supports ITU-T G.984.2 GPON OLT C++ application Single fiber bi-directional data links with symmetric

EPON OLT SFP PX20++ Transceiver | 1.25G Symmetric | 32dB

Featuring an enhanced optical budget of ~32dB, this IEEE 802.3ah compliant module supports high-density 1:64 split ratios and

GPON Class C++ SFP OLT Transceiver Datasheet | 6COM

GPON Class C++ SFP OLT Transceiver Features SFP with SC/PC Connector Transceiver 1490 nm DFB Tx with isolator 1310 nm

ZTE GPON OLT B+ Optical Transceiver: Full Technical Guide

This requires the OLT transceiver to possess high launch power and high receiver sensitivity to overcome the attenuation introduced

How Do I Check the Transmit and Receive Optical Power of an Optical ...

This page provides a guide on checking the transmit and receive optical power of an optical module for Huawei devices.

Understanding Optical Transceiver Performance: TX Power and RX

When it comes to evaluating the performance of an optical transceiver, two key factors come to the fore: Output power

RLTECH PON (PON Line Indicators and Split Ratio Design)

Optical Power Budget The optical power budget determines the transmission distance and splitting capability of a PON

SFP GPON OLT C+ Transceiver

The GPON OLT SFP module is contained in a SFP package with SC/UPC receptacle connector. The module consists 1490 nm DFB

The FOA Reference For Fiber Optics

The optical power meter usually reads in dBm for power measurements or dB with respect to a user-set reference value for loss.

How much minimum Optical Module Input Power (dBm) is good for

My Airtel Xstream Fiber connection's Optical Module Input Power(dBm) has significantly decreased from -24 dBm to

What Are GPON Optical Power Levels?

There are two main types of optical power levels in a GPON network: receive power levels and transmit power levels. Receive power

Detailed Explanation of Key Parameters for OLT Optical transceivers

Selecting an OLT optical transceiver requires comprehensive consideration of multiple technical indicators, including

Optical line termination

An optical line termination (OLT), also called an optical line terminal, is a device which serves as the service provider endpoint of a

GPON OLT/ONU Optical Transceiver Modules | AscentOptics

AscentOptics can provide GPON OLT SFP optical transceivers for OLT devices, which include different type, like B+, C+, C++ and

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

