

Uplink optical splitter device port



Summary of Content

The uplink port of an optical splitter aggregates optical signals from multiple downstream ports and connects the splitter to the OLT or core network, enabling bidirectional communication in GPON networks.

Function of the Uplink Port

The uplink port on an optical splitter serves as the interface that collects optical signals from the downstream ONUs/ONTs and transmits them upstream to the OLT or central network equipment. In the downstream direction, the uplink port receives optical signals from the OLT and distributes them to multiple output ports of the splitter, enabling a point-to-multipoint (P2MP) architecture typical of GPON networks . In the upstream direction, the uplink port multiplexes signals from multiple ONUs into a single optical channel for transmission back to the OLT .

Connection and Integration

In a GPON setup, the uplink port is typically connected to the OLT using high-speed SFP or SFP+ modules, supporting speeds such as 1 Gbps or 10 Gbps depending on the network design . The OLT sends Ethernet frames through its uplink ports to the GPON service processing module, which then encapsulates the data into GEM port packets for downstream transmission to ONUs . The uplink port ensures that all downstream traffic is aggregated efficiently and that upstream data from multiple ONUs is synchronized using TDMA (Time Division Multiple Access) to prevent collisions .

Types and Deployment

Article Content

switch

I'm still a bit fuzzy on what the Uplink port does for me, I had always assumed that this Uplink port was for me to plug

Split Ratios and Splitting Level of Optical Splitters

At the same time, higher split ratio splitters reduce bandwidth per ONU (optical network unit). And there will be

Astel GPON OLT 16 Port Optical Line Terminal

ASTEL GPON OLT completely meet relative standard of ITU G.984.x and FSAN, which is 1U rack mounted

Uplink | Wiki Made4it

What is Uplink? Uplinks are the network interfaces that connect the OLT (Optical Line Terminal) to the wider distribution network,

All You Need To Know About OLT Equipment

Uplink boards: GE optical interface board (including buckle board), optical transceiver integration module, generally a

Optical Splitters Demystified: The Silent Heroes Powering Your FTTH ...

An Optical Splitter, also known as a beam splitter, is a passive optical device that divides a single input optical signal

Understanding Fiber Optic Splitters: Principles,

4. What are the common types of fiber optic splitters? The common types of fiber optic splitters include the

What Is An Uplink Port In Computer Networking?

Discover the ins and outs of uplink ports in computer networking, their importance, functions, and how they are

Solved: Uplink Ports vs Normal Ports

Hi, An uplink is a connection from a device or smaller local network to a larger network. Some Ethernet computer

Cisco Catalyst PON Series Switches Hardware Installation Guide

In the upstream direction, a Cisco Catalyst PON Series ONT is connected to the optical splitter through the PON port.

Optical splitter advice : r/networking

We're looking for a solution that will duplicate the optics (1310) on our 100G uplink between east/west demarc routers. In effect, we

GPON Optical Line Terminal, 1U 8 Port – PPC Broadband | Product

Each GPON port supports the splitting ratio of 1:128, provides downstream bandwidth of 2.5Gbps and upstream bandwidth of

RG-MUX-EXT Transparent Distribution Expansion Module Optical

The 8-port modular transparent distribution device together with splitters evenly distributes the optical power in a 50:50 ratio to two

Understanding Uplink Ports: Improving network connectivity by

An uplink port is an essential component of network connectivity that allows devices to connect to a local area network

OLT Uplink Port Types Guide

Complete guide to OLT uplink port types including SFP+ 10G, QSFP+ 40G, and 100G uplinks. Bandwidth planning,

PEN Passive Aggregation Module

UPLINK-1 and UPLINK-2 of a PEN passive aggregation module can be connected to the same PEN central optical module. In this

XGPL-16000

Each XGS-PON port provides symmetric 10Gbps downlink/uplink bandwidth, significantly outperforming legacy GPON systems. It

Exploring the World of Fiber Optic Splitter Devices

Discover the benefits of fiber optic splitters! Learn how optical splitters enhance signal distribution and

Optical Splitters: Split Ratios, Splitting Architectures & PON Network ...

This guide focuses on two critical aspects of optical splitters that define FTTH performance: split ratios (how signals

What is an optical splitter?

The optical splitter is a component of the PON network. It is a passive device that connects the OLT and the ONU. Its function is to

Optical Line Terminal (OLT) The Ultimate Guide

In the architecture of modern Fiber-to-the-Home (FTTH) networks, one piece of equipment stands as the

Comprehensive Guide to Optical Splitters

An optical splitter is a crucial passive fiber optic device that splits and combines optical

Contact Us

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