

Connecting the beam splitter to the OLT

Article Overview

To connect an OLT to a beam splitter, use a single-mode fiber from the OLT PON port to the splitter input, ensuring the splitter type and ratio match your network design.

Step-by-Step Connection

1. Identify the OLT PON Port: Locate the PON port on your OLT (e.g., GPON or XGS-PON) that will serve the downstream ONTs. Each port typically supports one fiber connection to a splitter . 2. Choose the Appropriate Beam Splitter: Select a PLC (Planar Lightwave Circuit) or FBT (Fused Biconical Taper) splitter based on your network needs. PLC splitters are preferred for high port counts (1:32, 1:64) and centralized splitting, while FBT splitters are suitable for smaller deployments . Decide on the splitting ratio according to the number of ONTs to serve and the optical budget. 3. Connect the Fiber from OLT to Splitter Input: Use a single-mode fiber patch cord to connect the OLT PON port to the input port of the splitter. Ensure proper fiber connectors (typically SC/APC) and maintain clean, dust-free connections to minimize loss . 4. Connect Splitter Outputs to ONTs: Each output port of the splitter is connected to an ONT or ONU via single-mode fiber. In a primary splitting setup, the splitter is placed near the OLT, and outputs go directly to ONTs. In a secondary (cascaded) splitting setup, the first-stage splitter connects to a second-stage splitter closer to the subscriber, then to ONTs . 5. Verify Optical Power Budget: Each split reduces optical power. For example, a 1:4 splitter reduces power by approximately 6 dB, and a 1:32 splitter reduces it by about 15 dB. Ensure the OLT output and ONT receiver sensitivity accommodate the splitter loss . 6. Test the Connection: After connecting, use an optical power meter or OTDR to verify signal strength and continuity from the OLT through the splitter to each ONT. Confirm that all ONTs are reachable and receiving adequate signal.

Additional Considerations

- o Centralized vs. Distributed Splitting: Centralized splitting uses a high-ratio splitter at the central office, while distributed splitting uses smaller splitters in the field. Choose based on network density and maintenance preferences .
- o Connector Type and Polarity: Maintain consistent connector types (SC/APC recommended) and correct fiber polarity to avoid signal issues.
- o Environmental Protection: Outdoor splitters should be housed in weatherproof enclosures to protect fibers from damage and moisture. By following these steps, the OLT can be effectively connected to a beam splitter, ensuring proper signal distribution to all downstream ONTs while maintaining network performance and reliability.

The structure of primary light splitting is an OLT-optical splitter-ONU, and the optical splitters from OLT to



Connecting the beam splitter to the OLT

ONU are all

Enjoy the videos and music you love, upload original content, and share it all with

Fiber Broadband Association Technology Committee February 2025 The choice of splitter architecture for a passive optical network

INTRODUCTION This document provides instructions to install the Tellabs® OLT2 Optical Line Terminal (OLT2). The OLT2 is a self-

Keith Urban looked surprisingly different as he stepped out at the CMA Fest in Nashville on Thursday, alongside fellow

Google's service, offered free of charge, instantly translates words, phrases, and web pages between English and over 100 other

Hier sollte eine Beschreibung angezeigt werden, diese Seite lässt dies jedoch nicht zu.

Budowa Silesia Photonics (BWS PHOTONICS) designs and manufactures passive optical components, PLC splitters, AWG, FBT

Comprehensive guide to Passive Optical Networks (PON), covering OLT, ODN, ONU/ONT, GPON/XGS-PON/NG

Download free Chain Block CAD Block in DWG format. Ideal for lifting equipment layouts, rigging system design, and mechanical

MISS DIG is Michigan's only utility safety notification system. We make it easy for you to request public

Need to extend your Starlink internet from your home to a separate office 500 feet

Shop by department, purchase cars, fashion apparel, collectibles, sporting goods, cameras, baby items,

The centralized splitter approach typically uses a 1×32 splitter in an outside plant (OSP) enclosure, such as a fiber

In this scenario, the splitters are located in the central office or OLT location, shown in the blue circle. This architecture is similar to a

The user equipment ONU is connected through an ODN network (composed of an optical fiber and a passive optical

Web: <https://www.kremgroup.co.za>

