# Olt to access switch



## Overview

1. Application Scenario An apartment wants to use the XM60A to enable Omada equipment to access the OLT for networking and flexible deployment.

## Key Takeaways

An OLT connects to an access switch via optical or Ethernet interfaces, enabling GPON/EPON services to be distributed to end users with proper VLAN and bandwidth management.

### Network Topology

In a typical GPON setup, the OLT serves as the central device connecting the carrier backbone to multiple ONUs/ONTs through optical splitters.

### The OL

T is connected to the access switch either via SFP/SFP+ modules for Ethernet uplinks or directly through GPON ports if the switch supports PON interfaces. The switch then distributes services to end-user devices, often segregating traffic into VLANs for Internet, VoIP, and IPTV.

### VLAN and Traffic Configuration

© 2026 DOLPHIN FIBER SYSTEMS - All rights reserved

To manage multiple services, configure VLANs on the switch and map them to the OLT's GEM ports: VLAN 01: ManagementVLAN 10: InternetVLAN 20: VoIPVLAN 30: IPTV Each GEM port on the OLT encapsulates Ethernet services and broadcasts them to ONTs, which filter traffic based on port IDs. Upstream traffic from ONTs is scheduled using T-CONTs and DBA profiles to allocate bandwidth dynamically or with fixed reservations for high-QoS services like VoIP. Optical Modules and InterfacesOLT modules are designed for long-distance, high-power PON transmission, supporting split ratios up to 1: 64 or 1: 128.

Common types include SFP/SFP+ for GPON/EPON, XFP for 10G PON, and QSFP28 for future 25G/50G PON. Switch optical modules focus on Ethernet transmission, such as SFP 1G, SFP 2. 5G, and SFP+ 10G, depending on the required uplink speed and distance.

### Practical Considerations

Ensure the OLT and switch are compatible in terms of optical module type and interface speed. Use attenuators if the optical signal is too strong due to short distances.

### Configure DB

A profiles on the OLT to optimize upstream bandwidth usage.

### Verify VLA

N tagging and service separation to prevent traffic conflicts.

### Monitor the OL

T and switch using SNMP or web GUI tools for performance and troubleshooting. By following these steps, the OLT can effectively communicate with the access switch, providing reliable multi-service delivery to end users while maintaining proper bandwidth allocation and network segmentation.

## Article Content

What''s the OLT (Optical Line Terminal)?

What is an OLT? Definition: An Optical Line Terminal (OLT), also called an Optical Line Termination, is a network device located at the service

How to configure Optical Line Terminal (OLT) and Omada Switch with ...

1. Application Scenario An apartment wants to use the XM60A to enable Omada equipment to access the OLT for networking and flexible deployment. They have the following demands in this

*© 2026 DOLPHIN FIBER SYSTEMS - All rights reserved*

Getting Started With OLT Network Configuration, Cisco Catalyst PON ...

By default, the Telnet Server feature is enabled on an OLT but without an IP address, the client OLT cannot log in to the server OLT. To set up a login through Telnet, configure the IP address on the

GPON OLT Configuration Guide | PDF | Ip Address | Network Switch

This document is a user manual for an OLT (Optical Line Terminal) device that provides instructions on configuring the device through a web management interface.

Login OLT

To set up a login through Telnet, configure the IP address on the OLT through the console port. After the IP address is configured on the OLT Telnet server, you can configure other OLTs as Telnet clients.

Syrotech GPON OLT Configuration Guide | PDF | Ip Address

This document contains a user manual for command line reference for a GPON OLT high-end multi-service routing switch. It includes commands for accessing and configuring the switch, ports, VLANs,

Netronixbd/OLT-and-Switch-Config-Troubleshooting

It contains configuration commands, troubleshooting methods, power-check commands, and best practices for multiple OLT brands. Whether you''re managing a large ISP or setting up a lab,

How to configure Optical Line Terminal (OLT) and Omada Switch with ...

1) The switches with XM60A are deployed in each region and connected to the GPON network. After registration, the switches should be able to communicate with the OLT via the GPON network. 2)

Huawei SmartAX EA5800 Series OLT | Huawei Enterprise

Featuring distributed architecture, this multi-service access device provides users with a unified transmission platform for broadband, wireless, video, and video security.

Getting Started With OLT Network Configuration, Cisco Catalyst PON ...

The OLT receives the GEM frames through the GEM ports, decapsulates the GEM frames to Ethernet services, and transmits the services to the access layer device. Service profile

Difference between OLT,ONU,Router and Switch

*© 2026 DOLPHIN FIBER SYSTEMS - All rights reserved*

OLT ONU,Router and Switche as optical network transmission equipment, the difference between them has been widely concerned,Today Richerlink will explain in detail. 1.OLT and ONU First, the OLT is

What is The Difference Between OLT and Switch?

OLT (Optical Line Terminal) and switch are two different networking devices that serve distinct purposes.

Syrotech GPON OLT Configuration Guide | PDF | Ip Address

GPON OLT command line configuration manual - Free download as Word Doc (.doc), PDF File (.pdf), Text File (.txt) or read online for free. This document contains a user manual for command line

All You Need To Know About OLT Equipment

Introduction To OLT Equipment From Major Manufacturers 1. Huawei MA5680T Series SmartAX MA5680T/MA5683T/MA5608T devices are integrated

User Guide

About this Guide This User Guide provides information for managing TP-Link GPON OLT products via the web UI. Please read this guide carefully before operation.

Optical Line Terminal (OLT) Configuration Principle

Configuring an Optical Line Terminal (OLT) is a critical aspect of deploying and managing a Passive Optical Network (PON).

EPON OLT Configuration Guide

Local access to the OLT through the RS232 console port on front panel, see below picture. Dedicated local Telnet connection to the OLT by using the FE port on OLT front panel (outband interface).

OLT Port Configuration, Cisco Catalyst PON Series Switches

Restrictions for Protection Switch Group The rule template and unique template must be configured only after configuring the protection switch group. The protection switch group configuration fails if the

Related Video Reference

This video was associated with the source search result. Verify technical details against current product documentation and project requirements.

*© 2026 DOLPHIN FIBER SYSTEMS - All rights reserved*

## Contact Us

Continue your research online:

Website: https://dolphinspreschool.co.za
Technical inquiry: https://dolphinspreschool.co.za/project-desk.html
African project coordination: Waterfall City, Midrand, Gauteng, South Africa

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

© 2026 DOLPHIN FIBER SYSTEMS - All rights reserved