ZITHA TECH SPECIALTY CABLES (Pty) Ltd

Uganda OLT Optical Line Terminal 10G



Overview

Optical line terminals Our SDX 6000 Series of software-defined optical line terminals (OLTs) consists of open and disaggregated OLT GP5800-16 GPON OLT | 16.

Key Takeaways

10G OLTs in Uganda support high-speed fiber access using XGS-PON, 10G-EPON, and GPON standards, enabling scalable FTTH deployments.Overview of 10G OLTs

10G Optical Line Terminals (OLTs) are central devices in fiber access networks that manage multiple Optical Network Units (ONUs) or Optical Network Terminals (ONTs). They provide high-speed connectivity for residential, business, and enterprise users, supporting services such as IPTV, VoIP, and high-bandwidth internet. Modern 10G OLTs are compatible with multiple PON standards, including XGS-PON, 10G-EPON, GPON, and can integrate with Ethernet and Carrier Ethernet networks for flexible deployment .

Key 10G OLT Solutions

1. Adtran SDX 6000 and Total Access 5000 (TA5000) Series

• Supports 10G Combo PON, XGS-PON, GPON, 10G-EPON

• Scalable and flexible for high-speed broadband delivery

• Pure Ethernet core with support for point-to-point and Active Ethernet services

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• Designed for easy integration with existing networks and future growth 2. Harmonic Fin 10G SFP+ OLT Module

• Compact module for FTTx applications

• Can be deployed as a central OLT or Remote OLT (R-OLT)

• Supports XGS-PON and 10G EPON with remote configuration

• Enables convergence of DOCSIS and PON networks, maximizing existing infrastructure

• Handles up to 128 splits per module, suitable for indoor and outdoor deployments 3. PLANET GPL-8000 GPON OLT

• Equipped with four 10G SFP+ uplink ports and multiple 1G ports

• Supports up to 1024 ONUs/HGUs per OLT

• Provides high bandwidth (2.5 Gbps downstream, 1.25 Gbps upstream) and long-distance coverage (up to 20 km)

• Features VLAN, Dynamic Bandwidth Allocation (DBA), SLA, and Layer 3 routing support

• Flexible power options with redundant AC/DC supply for reliability 4. Zyxel GPON OLTs

• Scalable and high-performance fiber infrastructure

• Supports dynamic bandwidth allocation, QoS, and remote management

• Vendor-neutral, allowing integration with third-party ONTs

• Optimized for large user bases and future network expansion 5. FS OLT Devices

• Range includes GPON, EPON, and XG(S)PON

• Designed for high-quality, cost-effective fiber access networks

• Suitable for both small-scale and large-scale deployments
Deployment Considerations in Uganda
• Network Scale: Choose OLTs that support the expected number of subscribers and split ratios. For example, PLANET GPL-8000 supports 1:128 splits per port.

• PON Standard: XGS-PON and 10G-EPON are recommended for high-speed 10G services, while GPON remains cost-effective for standard broadband.

• Integration: Consider OLTs that can integrate with existing Ethernet or DOCSIS networks to reduce infrastructure costs.

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• Environmental Conditions: Outdoor-ready OLT modules (I-Temp/E-Temp) are suitable for Uganda's varied climate.

• Management and Scalability: Remote management, dynamic bandwidth allocation, and Layer 3 routing support are essential for efficient operations and future growth.
Conclusion

Deploying 10G OLTs in Uganda enables high-speed, scalable fiber access networks capable of supporting modern broadband services. Solutions like Adtran SDX 6000, Harmonic Fin 10G, PLANET GPL-8000, and Zyxel GPON OLTs provide flexibility, high performance, and compatibility with multiple PON standards, making them suitable for both urban and rural FTTH deployments .

Article Content

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OLT

GP5800-16 GPON OLT | 16-Port Fiber Access Platform for FTTH & ISP Networks 10G SFP+ uplink

OLT 4G 3G FTTX With Telecom 1G, 10G And Optical

Discover our OLT products with 4 G, 3 G support and 1 G, 10 G

FlexSym Optical Line Terminal Two (OLT2)

FlexSym OLT2 has optically connected distributed endpoints that can be GPON or symmetrical 10G XGS

USU Telecom: Optical Line Terminal (OLT) Solutions

Explore USU Telecom''s Optical Line Terminal solutions, including GPON OLT products for enhanced connectivity and telecom

EXS1610 | Vecima Networks, Inc.

Explore Vecima''s EXS1610 All-PON Shelf that supports IEEE 10G EPON, DOCSIS Provisioning over EPON (DPoE), and ITU-T XGS

OLT Devices| High-Quality Optical Line Terminals

Explore our range of high-quality GPON, EPON, and XG (S)PON OLT products. Find the perfect Optical

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Our Optical Line Terminal (OLT) is the central controller of any Passive Optical Network—efficiently managing data, voice, and video

FTTH Solutions for ISPs in Tanzania and Uganda: A Deployment Guide

For ISPs scaling across multiple areas in Tanzania or Uganda, 10G fibre uplinks at aggregation points are the

Uganda OLT Optical Line Terminal QSFP28

In modern communication networks, optical line terminal (OLT) is the core device to realize point-to-multipoint(P2MP) in passive

Fiber OLT 8

Eight-port GPON optical line terminal (OLT) designed to manage fiber internet service for up to 1,024 clients (128 per port).

Ubiquiti UFiber GPON Optical Line Terminal

The Ubiquiti UFiber OLT offers 8 x GPON ports and supports up to 1024 concurrent clients with physical links of up to 20 km in

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Learn about the optical line terminal (OLT): its features, applications, and importance in

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Conclusion The Optical Line Terminal (OLT) is the foundation of modern fiber optic networks. It supports high-speed

How Optical Line Terminals (OLTs) Are Revolutionizing High-Speed

An Optical Line Terminal (OLT) is a high-capacity device that serves as the central hub of a Passive Optical Network

OLT, Optical line terminal

The ISCOM6860 is a high-density carrier-grade Optical Line Terminal (OLT) platform. It offers EPON, 10G EPON, GPON, XGS

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GPON | United Telecoms Limited

Optical Line Terminals UTL GPON OLT is carrier grade, which is suitable for Telecom Operators. Structured optical fiber from UTL

Fiber XGS/XG/G-PON OLT

An eight-port optical line terminal that can deliver 10 Gbps uplink/downlink speeds to over 2,000 subscribers.

Uganda OLT Optical Line Terminal QSFP28

GPON Optical Line Terminal The U Fiber OLT offers eight GPON ports and supports up to 1024 concurrent clients with physical links

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What is OLT? The Ultimate Guide to Optical Line Terminals

An Optical Line Terminal (OLT) is the central endpoint hardware in a PON architecture. Positioned in the Service

U®Fiber UF-OLT Quick Start Guide

Introduction Thank you for purchasing the Ubiquiti Networks® U®Fiber OLT. This Quick Start Guide is designed to guide you through

Introduction and Comparison of EPON, GPON, 10G EPON, and 10G

A PON network refers to an optical distribution network (ODN) between an OLT (optical line terminal) and an ONU (optical network

OLT

GP5800-16 GPON OLT | 16-Port Fiber Access Platform for FTTH & ISP Networks 10G SFP+ uplink (16*GPON+8*RJ45+4*SFP) OLT

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UBIQUITI GPON Optical Line Terminal (OLT) UFiber OLT (UF-OLT)

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ZTE ZXA10 C600 Optical Line Terminal

The ZTE C600 is a cutting-edge Optical Line Terminal (OLT) designed for modern fiber-optic access networks. As a

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