

FTTH Application-Grade 100G Active Optical Device Selection Guide



Summary of Content

Selecting 100G active optical devices for FTTH requires understanding QSFP28 transceivers, active optical cables, reach, fiber type, and deployment architecture to ensure optimal performance and compatibility.

Key Considerations for 100G FTTH Deployments

1. Deployment Architecture: FTTH networks can use home-run, centralized split, distributed split, or blended architectures. The choice affects the type of optical devices needed at the central office (CO) or headend (HE) and the fiber distribution strategy . 2. Transceiver Form Factors:

- QSFP28 is the most common 100G form factor, supporting four lanes at 25 Gbps each, yielding 100 Gbps payload. It can also support breakout into four 25G connections .
- CFP/CFP2/CFP4 modules are alternatives for longer reach or specific OTN applications . 3. Optical Technology and Reach:
- SR4/PSM4: Short-reach multimode or single-mode, typically up to 100-500 meters.
- LR4/CWDM4/ER4/ZR4: Long-reach single-mode transceivers, supporting distances from 2 km to 80 km .
- 100G-DR/FR/LR: Single-lambda PAM4 modules for 100G Ethernet or OTU4, with reach from 500 m to 10 km . 4. Connector Types:
- LC connectors are common for single-mode or multimode fiber.

Article Content

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To get started, use this quick selection guide to help determine the right architecture, deployment method, and products you need to

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This guide provides a comprehensive analysis of form factors, fiber types, transmission distances, and compliance standards

Juniper 100G Optical Transceivers and Cables Guide

Use this guide to learn about the Juniper Networks® 100G optical transceivers and cables, their specifications, and

Understanding FTTH Architecture

Fiber Optic Network Architectures The selection of FTTH networks revolves around two primary paths – Passive Optical Network

FTTH Network Design & Planning Guide | GPON OLT ONT | Langzhi

Complete FTTH network design and planning guide covering GPON architecture, OLT/ONT selection, splitter ratios,

A Complete Guide to Selecting 100G QSFP28 Optical Transceivers:

Choose the best 100g qsfp28 optical transceiver for your network by comparing compatibility, distance, fiber type, and

100G Optical Module: How to Choose Between SR4,

Selecting the appropriate 100G module for your network can significantly enhance

Optical Fiber Selection Guide

The product offering includes standard telecom single-mode and multimode optical fiber, either graded-index or step-index, specialty

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