

Low-speed optical modules in Nigeria



AI Overview

Low-speed optical modules, such as 100/155 Mbps SFP transceivers, are available in Nigeria for short- and medium-distance fiber networking applications.

Overview

Low-speed optical modules, often referred to as SFP (Small Form-factor Pluggable) transceivers, are compact, hot-swappable devices that convert electrical signals into optical signals for fiber optic transmission. They are commonly used in Fast Ethernet (100 Mbps) and SDH/STM-1 networks, making them suitable for enterprise, telecom, and data center applications in Nigeria . These modules typically operate with 1310nm FP or 1550nm DFB lasers and use SC duplex connectors, supporting distances from 15 km up to 80 km depending on the fiber type .

Types and Features

- Multi-Mode (MMF): Designed for short distances, usually within buildings or data centers, up to 550 meters .
- Single-Mode (SMF): Supports longer distances, from 10 km to 80 km, ideal for connecting different office branches or telecom nodes across cities like Lagos .
- Bi-Directional (BiDi): Uses a single fiber strand for both sending and receiving data, reducing cabling costs .
- Power and Interface: Operates on +3.3V or +5V DC with PECL logic interfaces, consuming low power ($\leq 1.5W$ typical), which is energy-efficient for continuous operation

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