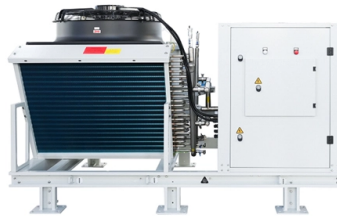


# Linear Driven Pluggable High-Precision Optics for the Internet of Things



## Article Overview

Linear Driven Pluggable Optics (LPO) provide low-latency, energy-efficient, and high-precision optical connectivity, making them ideal for IoT and high-speed network applications.

### Overview of Linear Driven Pluggable Optics

Linear Driven Pluggable Optics (LPO) are a type of optical transceiver that eliminate the traditional digital signal processor (DSP) inside the module, replacing it with a linear drive approach using a Transimpedance Amplifier (TIA) and high-linearity driver chip with equalization (EQ) capabilities. This design shifts signal processing to the host device, such as a switch or router ASIC, which handles digital retiming, equalization, and forward error correction (FEC). By doing so, LPO modules achieve lower power consumption, reduced latency, and simplified module design compared to DSP-based optics.

### Key Advantages

- **Low Power Consumption:** LPO modules reduce power usage by approximately 50% compared to traditional DSP-based modules, which is critical for IoT devices and edge computing where energy efficiency is essential.
- **Low Latency:** Removing the DSP and using high-linearity analog components allows signal recovery in picoseconds, supporting real-time IoT applications.
- **Cost Efficiency:** LPO modules reduce the overall bill of materials by replacing expensive DSP components with simpler, more cost-effective analog components.

## Article Content

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We are there now.” As designs continue to evolve, current optical interconnects choices are now between traditional

## Contact Us

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