

LVPECL optical module



Summary of Content

LVPECL optical modules are high-speed optical transceivers that use Low-Voltage Positive Emitter-Coupled Logic (LVPECL) for differential signaling, enabling reliable data transmission in communication networks.

Overview

LVPECL optical modules are designed for high-speed data communication, often used in SFP, QSFP, OSFP, and 1x9 form factors. They provide differential PECL signaling, which ensures strong edge integrity and high-frequency performance, making them suitable for SerDes/CDR reference paths and other high-speed interfaces. These modules are commonly used in telecommunication networks, supporting protocols like FDDI, ATM, SONET/OC-3, and SDH/STM-1.

Key Features

- **Data Rates and Transmission:** LVPECL modules can operate at speeds such as 155 Mbps and support transmission distances up to 40 km over single-mode fiber (SMF) using wavelengths like 1550 nm for TX and 1310 nm for RX.
- **Voltage Compatibility:** They support multiple voltage levels, including 3.3V, 5V, and combined 3.3V/5V, allowing flexible integration with different system designs.
- **Differential Signaling:** LVPECL provides high swing and low jitter, which is critical for maintaining signal integrity at high frequencies.
- **Compliance and Safety:** Many LVPECL optical modules are Class 1 laser products, compliant with IEC 60825 and FDA 21 CFR 1040.10/1040.11 standards.

Applications

Article Content

Ultra Low Jitter LVDS and LVPECL XOs

The AK2B/AK3B models are compatible with industry-standard interfaces such as LVPECL, LVDS, and HCSL, allowing for seamless

LVPECL Technology: Principles, Classifications, Applications, and ...

LVPECL maintains the core structure of Emitter-Coupled Logic (ECL) but works at lower voltages, like 3.3V or 2.5V,

LVDS, M-LVDS & PECL ICs | TI

Deliver and distribute data faster and more reliably with our robust portfolio of LVDS, M-LVDS and PECL serializers, deserializers,

Ultra-low jitter timing sources for Optical Transceiver Modules

Diodes Incorporated addresses these needs with ultra-low jitter timing sources in compact 2016-size packages for Small Form-factor

155Mbps 1x9 Optical Transceiver PECL LVPECL Module BIDI

These transceiver modules offer differential PECL for 3.3V, 5V, 3.3V/5.0V voltages and support system designers to implement FDDI

1X9 Single Fiber Bidirectional 2.5G/84Mb/s SM 1550nm/1310nm 3.3V

We specialize in 1X9 Optical module series, SFP series, Optical fiber patch cord & cable series, Optical fiber adapter series, Optical

1X9 Single Fiber Bidirectional 1.25G/155Mb/s SM 1310nm/1550nm

We specialize in 1X9 Optical module series, SFP series, Optical fiber patch cord & cable series, Optical fiber adapter series, Optical

PECL, LVPECL

LVPECL and PECL are both offshoots of the older ECL technology, first introduced in the 1960s. PECL stands for Positive Emitter

AN-828 Termination

There are many different termination schemes for the LVPECL drivers; this application note covers the standard DC coupled

NT22012 | 125Mbps POF LVPECL Receiver (TIA+LA) | Semtech

The NT22012 consists of a high sensitivity AGC (automatic gain control) trans-impedance amplifier followed by a limiting Amplifier

Contact Us

For more information, pricing, or custom solutions, please contact us:

Website: <https://benniedesignstudio.co.za>

Email: sales@benniedesignstudio.co.za

Phone: +27 82 391 4765

Address: The Towers, 1 St Georges Mall, Cape Town, 8001, South Africa

This document is for informational purposes only. Specifications subject to change without notice.

