General Description

DIDT

The HXR6104 Transimpedance Limiting Amplifier array is a member of IDT's family of Optical Receiver Transmitter Array (ORTA) products targeted at the parallel optical links market. Together with a PIN detector array or discrete detectors, high capacity, high availability optical links can be designed for telecom and datacom applications.

The 3.3V SiGe device integrates the transimpedance pre-amplifier, the limiting post-amplifier and a versatile CML output stage for four optical input channels.

IEEE 802.3ba Ethernet Transceivers

InfiniBand QDR & FDR Active Cables

Proprietary multi-channel optical modules

Features

- 20 μ A_{PP} sensitivity for 10⁻¹² BER at 10.3 Gbps
- 60 mW/ch power consumption at low setting
- Automatic gain and threshold control
- 3 mA_{PP} minimum peak to peak overload
- Adjustable CML output stage amplitude
- Adjustable output pre-emphasis amplitude and duration
- Adjustable signal detect threshold & SQUELCH
- Independent RSSI per channel output
- Independent per channel temperature monitor
- Data polarity inversion per channel
- Optimized for isolated and common cathode photo-detector arrays from multiple vendors
- Control lines accessible on both sides of the die
- QSFP MSA compliance

Ordering Information

Part	Temp Range	Pin-Package
HXR6104-DNT	0°C to +85°C	Bare Die 2.05mm x 1.67mm
HXR6104-EVB	Room Temp	Evaluation Board

For price, delivery schedules, and to place orders, please contact IDT: www.IDT.com/go/sales

VCC1 VEE1 VCC2 VEE2 x=4 VPDx x=3 x=2 x=1LOS 24 PRE-**EMPHASIS** 🗎 ZxP PxP İ ZxN CONTROL RSSI NOTINT CONF1 CONF2 SCL SDA Serial Digital I/F (I2C)

Figure 1: Device diagram

Device Diagram

Applications

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Sales

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Tech Support

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