

## General Description

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.

## Applications

- IEEE 802.3ba Ethernet Transceivers
- InfiniBand QDR & FDR Active Cables
- Proprietary multi-channel optical modules

## Features

- 20  $\mu\text{A}_{\text{pp}}$  sensitivity for  $10^{-12}$  BER at 10.3 Gbps
- 60 mW/ch power consumption at low setting
- Automatic gain and threshold control
- 3 mA<sub>pp</sub> 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](http://www.IDT.com/go/sales)

## Device Diagram

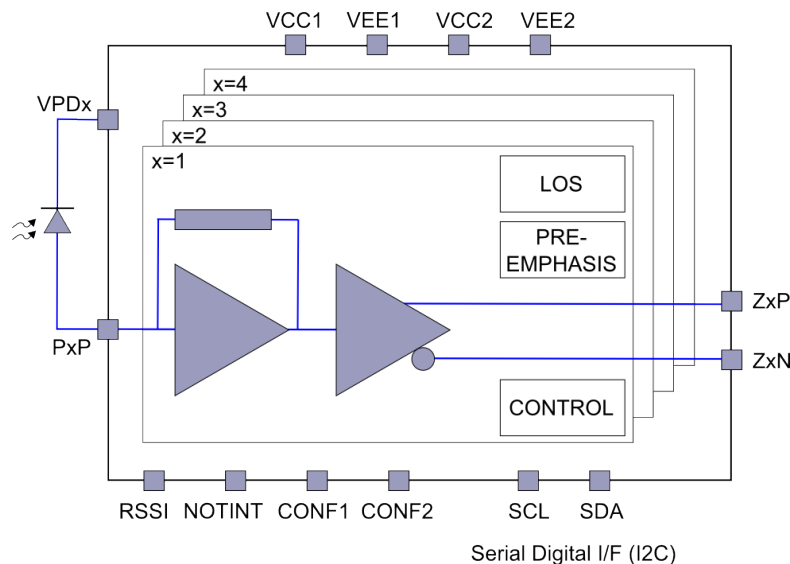


Figure 1: Device diagram

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