

## General Description

The HXR42400 Trans-impedance and Limiting Amplifier array for LR4 parallel optical applications supports data rates up to 28Gbps and optical reach above +10km. Together with a four-channel photo diode array or discrete detectors, high-capacity, high-availability optical links can be designed for long reach telecom or datacom applications.

The 3.3V SiGe device integrates the Trans-impedance pre-amplifier, the limiting post-amplifier and a versatile CML output stage for four optical channels. Available in die form.

## Applications

- Ethernet 100GBASE-LR4 for 10km reach
- 128G Fibre Channel modules
- Long reach Ethernet optical modules
- Long reach InfiniBand EDR optical modules
- Proprietary multi-channel optical modules

## Features

- 40  $\mu$ App receiver sensitivity for  $10^{-12}$  BER at 28Gbps (LR4: +10km reach)
- Better than 2.4 mApp overload
- 150mW per channel power consumption if operated with an external CDR
- Adjustable output swing size and pre-emphasis in limiting mode
- Adjustable signal detect threshold
- Independent, per channel RSSI
- Optimized for isolated and common cathode photo-detector arrays from multiple vendors
- 750um pitch for high speed I/O channels
- QSFP MSA compliance
- Ethernet compliance

## Ordering Information

Part Number	Temp Range	Pin-Package
HXR42400-DNU <sup>1</sup> HXR42400-TNU <sup>2</sup>	-5°C to +95°C	Bare Die: 1.975 x 3.350mm
HXR42400EVB	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)

Notes:

<sup>1</sup> – Waffle Pack

<sup>2</sup> – Blue Tape

# Block Diagram

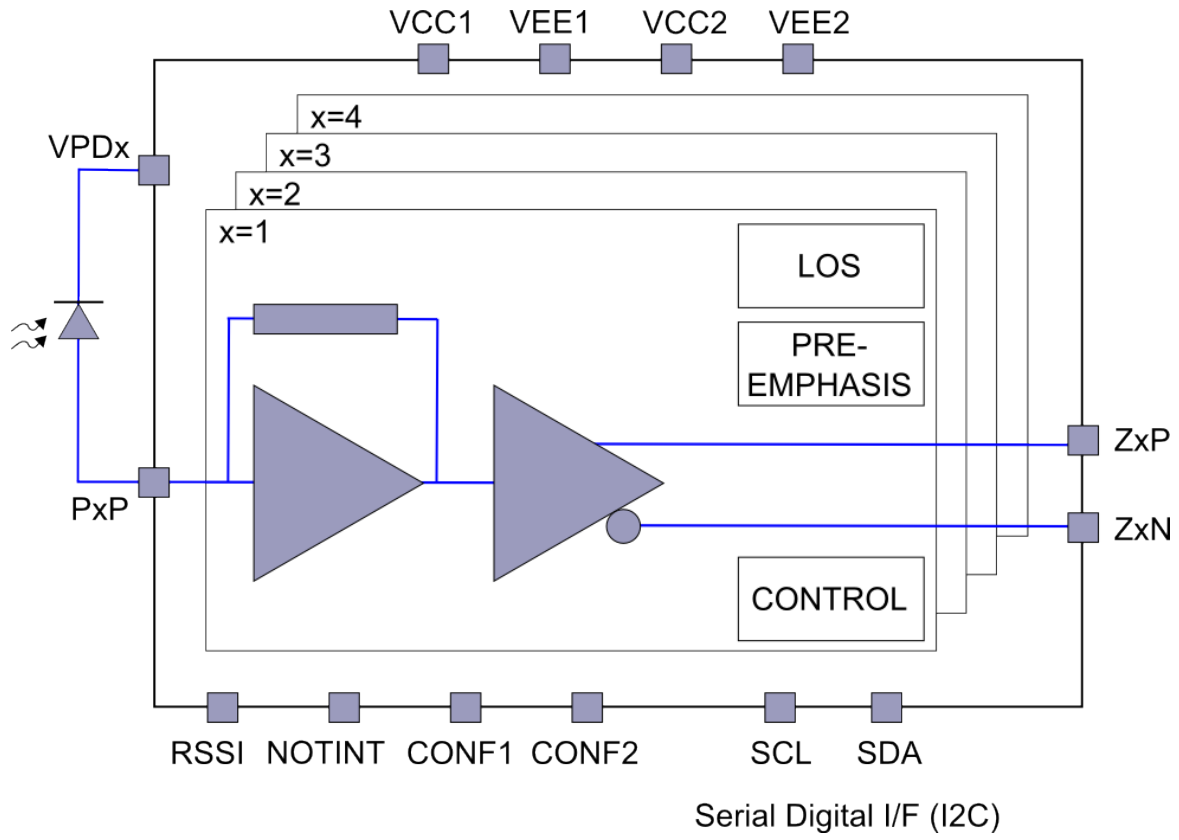


Figure 1: Block diagram

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