

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 μ 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 ¹ HXR42400-TNU ²	-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

Notes:

¹ – Waffle Pack

² – Blue Tape

Block Diagram

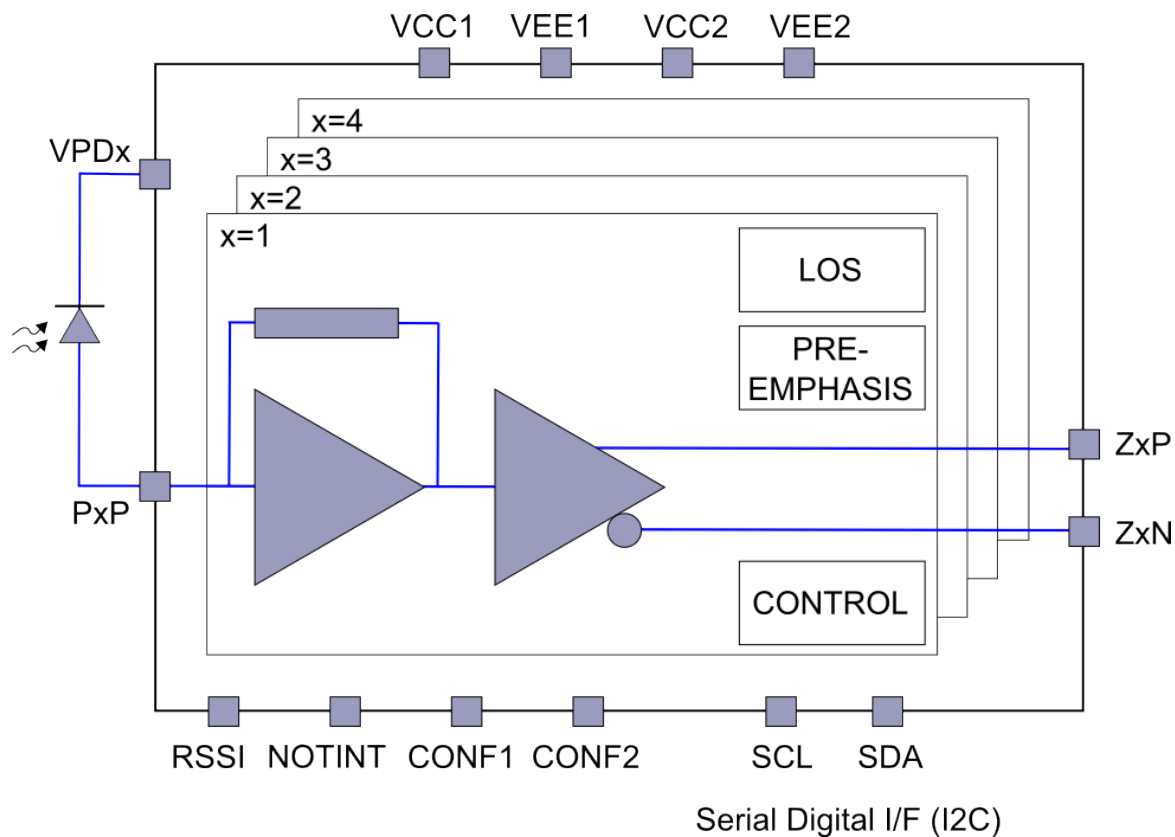


Figure 1: Block diagram

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