General Description

The HXR42100 Trans-impedance Limiting Amplifier array is a member of IDT’s family of Optical Receiver Transmitter Array (ORTA) products targeted at the single channel fiber optic links market. Together with a discrete PiN detector array, high-capacity, high-availability optical links can be designed for datacom applications. This product is ideal for 100G to 25G fan-out applications.

The 3.3V SiGe device integrates the trans-impedance pre-amplifier, the limiting post-amplifier and a versatile CML output stage for a single, differential electrical channel.

Applications

• 100G to 25G Ethernet LR ran-out modules
• 32G Fibre Channel modules
• InfiniBand EDR 25G transceivers / AOC
• Proprietary multi-channel optical modules

Features

• 40 \( \mu \text{App} \) receiver sensitivity for \( 10^{-12} \) BER at 28Gbps.
• Better than 2.4 mApp overload
• 128 mW per channel power consumption
• Adjustable output swing size, pre-emphasis and signal detect threshold
• Independent, scalable RSSI output
• Optimized for isolated and common cathode photo-detector arrays from multiple vendors
• \(^{\text{i}2\text{C}}\) Compatible serial interface
• Suitable for TO can applications
• SFP25+ and SFP28+ MSA compatible

Ordering Information

<table>
<thead>
<tr>
<th>Part</th>
<th>Temp Range</th>
<th>Pin-Package</th>
</tr>
</thead>
<tbody>
<tr>
<td>HXR42100-DNT</td>
<td>0°C to +85°C</td>
<td>Bare Die* 1055 x 850( \mu \text{m} )</td>
</tr>
<tr>
<td>HXR42100-EVB</td>
<td>Room temp</td>
<td>Evaluation Board</td>
</tr>
</tbody>
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* Design Size; Actual die size may be slightly larger/smaller

For price, delivery schedules, and to place orders, please contact IDT: [www.IDT.com/go/sales](http://www.IDT.com/go/sales)

Device Diagram

![Device Diagram](image)
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