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 µApp receiver sensitivity for 10⁻¹² BER at 28Gbps.
• Better than 2.4 mAmp 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
• I²C 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 850µm</td>
</tr>
<tr>
<td>HXR42100-EVB</td>
<td>Room temp</td>
<td>Evaluation Board</td>
</tr>
</tbody>
</table>

* 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

Device Diagram

Figure 1: Device Diagram