**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 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
- 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](http://www.IDT.com/go/sales)

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**Device Diagram**

![Device Diagram](image)
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