General Description
The HXR8204 Transimpedance Limiting Amplifier array is a member of IDT’s family of Optical Receiver Transmitter Array (ORTA) products targeted at the parallel optical links market. Together with a PIN detector array or discrete detectors, high-capacity, high-availability optical links can be designed for telecom and 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.

Applications
• 100G Ethernet SR4 modules
• 100G Ethernet AOC
• InfiniBand EDR 100G transceivers
• InfiniBand EDR 100G active cables
• Proprietary multi-channel optical modules

Features
• 60 µApp receiver sensitivity for $10^{-12}$ BER at 28Gbps
• Better than 2.4 mA overloads
• 126 mW per channel power consumption
• Adjustable output swing size and pre-emphasis in limiting mode and signal detect threshold
• Independent, per channel RSSI
• Optimized for isolated and common cathode photo-detector arrays from multiple vendors
• Control lines accessible on both sides of chip
• QSFP MSA compliance

Device Diagram

Ordering Information

<table>
<thead>
<tr>
<th>Part</th>
<th>Temp Range</th>
<th>Pin-Package</th>
</tr>
</thead>
<tbody>
<tr>
<td>HXR8204-DNT</td>
<td>0°C to +85°C</td>
<td>Bare Die* 1.975mm x 1.6mm</td>
</tr>
<tr>
<td>HXR8204-EVB</td>
<td>Room temp</td>
<td>Evaluation Board</td>
</tr>
</tbody>
</table>

* Die Design Size; Actual die size may be slightly larger

For price, delivery schedules, and to place orders, please contact IDT: www.IDT.com/go/sales

Figure 1: Device diagram
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