General Description

The HXR8212 Trans-impedance 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

• Ethernet 100GBASE-SR4 modules
• InfiniBand 300G EDR transceivers
• InfiniBand 300G EDR active cables
• Proprietary multi-channel optical modules

Features

• 60 µApp receiver sensitivity for 10^-12 BER at 28Gbps
• Better than 2.4 mApp overload
• 141mW per channel power consumption
• Adjustable output swing size and pre-emphasis in limiting mode and signal detect threshold
• Independent RSSI
• Optimized for isolated and common cathode photo-detector arrays from multiple vendors
• Control lines accessible on both sides
• QSFP MSA compliance

Ordering Information

<table>
<thead>
<tr>
<th>Part</th>
<th>Temp Range</th>
<th>Pin-Package</th>
</tr>
</thead>
<tbody>
<tr>
<td>HXR8212-DNT</td>
<td>0°C to +85°C</td>
<td>Bare Die*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1975 x 3600µm</td>
</tr>
<tr>
<td>HXR8212-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

Device Diagram

Figure 1: Device diagram