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

Device Diagram

![Device Diagram](image)

Figure 1: Device diagram