General Description

The HXR6112 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 datacom applications.

The 3.3V SiGe device integrates the transimpedance pre-amplifier, the limiting post-amplifier and a versatile CML output stage for twelve optical channels.

Applications

• IEEE 802.3ba Ethernet transceivers
• InfiniBand QDR & FDR active cables
• Proprietary multi-channel optical modules

Device Diagram

Features

• 20 µApp receiver sensitivity for $10^{-12}$ BER at 16 Gbps. Better than 3 mApp overload
• 60 mW per channel power consumption with low power setting
• Adjustable output swing size and pre-emphasis and signal detect threshold
• Independent RSSI
• Optimized for isolated and common cathode photo-detector arrays from multiple vendors
• Control lines accessible on both sides of the chip

Ordering Information

<table>
<thead>
<tr>
<th>Part</th>
<th>Temp Range</th>
<th>Pin-Package</th>
</tr>
</thead>
<tbody>
<tr>
<td>HXR6112-DNT</td>
<td>0°C to +85°C</td>
<td>Bare Die</td>
</tr>
<tr>
<td>HXR6112-EVB</td>
<td>Room Temp</td>
<td>2.05mm x 3.65mm</td>
</tr>
</tbody>
</table>

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

Figure 1: Device diagram