General Description
The HXR5004B 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 transimpedance pre-amplifier, the limiting post-amplifier and a versatile CML output stage for four 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 10.3 Gbps; better than 3.0mApp overload
• 66 mW per channel power consumption with low power setting
• Adjustable output swing size and pre-emphasis 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 of the chip
• QSFP MSA compliance

Ordering Information

<table>
<thead>
<tr>
<th>Part</th>
<th>Temp Range</th>
<th>Pin-Package</th>
</tr>
</thead>
<tbody>
<tr>
<td>HXR5004B</td>
<td>0°C to +85°C</td>
<td>Bare Die 2.05mm x 1.67mm</td>
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</tbody>
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For price, delivery schedules, and to place orders, please contact IDT: www.IDT.com/go/sales

Figure 1: Device diagram
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