

Description

The HXR6101 Trans-impedance Limiting Amplifier is targeted at the optical links market. Together with a PIN detector, high-capacity, high-availability optical links can be designed for datacom applications.

The 3.3V SiGe device integrates the trans-impedance pre-amplifier, the limiting post-amplifier and a versatile CML output stage for a single 16 Gbps channel.

Typical Applications

- IEEE 802.3ae Ethernet transceivers
- InfiniBand QDR & FDR active cables
- Proprietary optical modules

Features

- 20 μ App receiver sensitivity for 10^{-12} BER at 10.3 Gbps
- Better than 3 mApp overload
- 60 mW power consumption with low power setting
- Adjustable output swing size and pre-emphasis mode and signal detect threshold
- A/D read-out of temperature, RSSI information

Ordering Information

Part	Temp Range	Pin-Package
HXR6101-DNT	0°C to +85°C	Bare Die 750um x 750um
HXR6101-EVB	Room Temp	Evaluation Board

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

Block Diagram

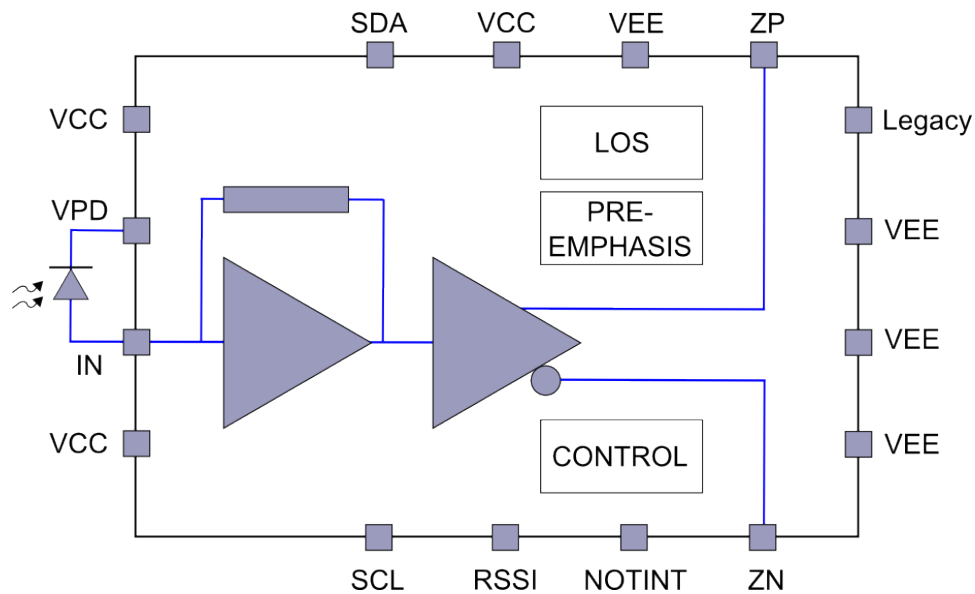


Figure 1: Block Diagram

IMPORTANT NOTICE AND DISCLAIMER

RENESAS ELECTRONICS CORPORATION AND ITS SUBSIDIARIES (“RENESAS”) PROVIDES TECHNICAL SPECIFICATIONS AND RELIABILITY DATA (INCLUDING DATASHEETS), DESIGN RESOURCES (INCLUDING REFERENCE DESIGNS), APPLICATION OR OTHER DESIGN ADVICE, WEB TOOLS, SAFETY INFORMATION, AND OTHER RESOURCES “AS IS” AND WITH ALL FAULTS, AND DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NON-INFRINGEMENT OF THIRD PARTY INTELLECTUAL PROPERTY RIGHTS.

These resources are intended for developers skilled in the art designing with Renesas products. You are solely responsible for (1) selecting the appropriate products for your application, (2) designing, validating, and testing your application, and (3) ensuring your application meets applicable standards, and any other safety, security, or other requirements. These resources are subject to change without notice. Renesas grants you permission to use these resources only for development of an application that uses Renesas products. Other reproduction or use of these resources is strictly prohibited. No license is granted to any other Renesas intellectual property or to any third party intellectual property. Renesas disclaims responsibility for, and you will fully indemnify Renesas and its representatives against, any claims, damages, costs, losses, or liabilities arising out of your use of these resources. Renesas' products are provided only subject to Renesas' Terms and Conditions of Sale or other applicable terms agreed to in writing. No use of any Renesas resources expands or otherwise alters any applicable warranties or warranty disclaimers for these products.

(Disclaimer Rev.1.0 Mar 2020)

Corporate Headquarters

TOYOSU FORESIA, 3-2-24 Toyosu,
Koto-ku, Tokyo 135-0061, Japan
www.renesas.com

Contact Information

For further information on a product, technology, the most up-to-date version of a document, or your nearest sales office, please visit:
www.renesas.com/contact/

Trademarks

Renesas and the Renesas logo are trademarks of Renesas Electronics Corporation. All trademarks and registered trademarks are the property of their respective owners.