

HXT8212-DNG

12-Channel 28Gbps VCSEL Driver

The HXT8212 is a 12-channel VCSEL driver array with equalization input and high output current. In conjunction with a VCSEL array, the transmitter can provide as high as 28Gbps NRZ signals with low power consumption.

The HXT8212 is designed with CML input, input equalization, and laser driver. Enhanced analog mode and I<sup>2</sup>C digital control interface provide various control and supervision functions. The device also supports low power mode (with CDR) and high power mode (without CDR) to accommodate customized applications.

Applications

- Ethernet SR modules and AOC
- Industrial optical interconnect applications and optical HDMI cables
- InfiniBand EDR transceivers and AOC
- Proprietary multi-channel optical modules

Features

- Low power consumption of 168mW per channel while delivering 5mA average and 5mA modulation current
- Compatible with common cathode and isolated VCSEL arrays
- 2-wire interface control and symmetric pad design maximize module design flexibility
- Up to 10mA average and 10mA modulation current
- Built-in VCSEL Burn-in mode
- Input equalization for non-CDR modules

Ordering Information

Part	Temp. Range	Pin-Package
HXT8212-DNG	-40 to +105°C	Bare Die* 1975 x 3600µm
HXT8212-EVB	Room Temp.	Evaluation Board

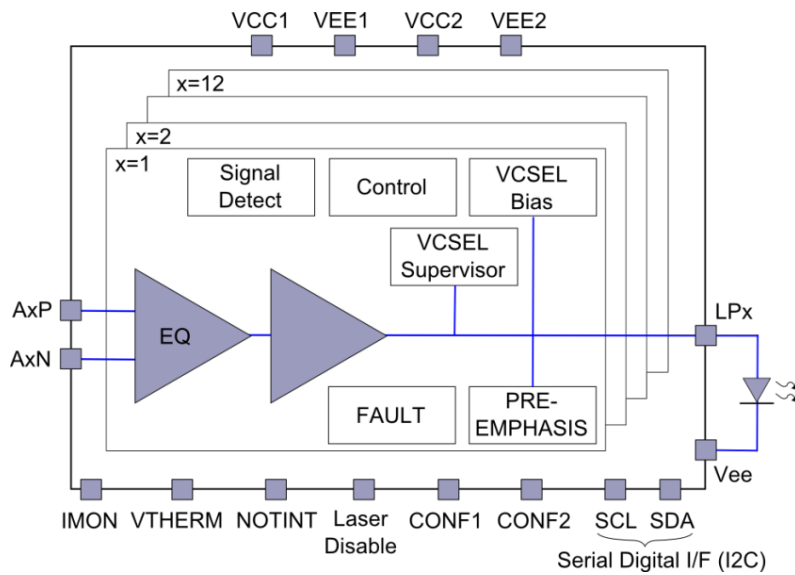


Figure 1. Block Diagram

## 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](http://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/](http://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.