# HXR8212-DNG

28G – 12-Channel TIA+PA Receiver

The HXR8212 is a 12-channel trans-impedance limiting amplifier array with post amplifiers. The device is a member of the Renesas family of Optical Receiver Transmitter Array (ORTA) products. Combined with a PIN photo-detector array, the user can design a high-bandwidth optical receiver for Ethernet, InfiniBand, and Industrial applications.

The HXR8212 operates in a 3.3V supply and with high BW post amplifier and a versatile CML output. Built-in equalization offers superior signal output, and it offers various enhanced analog mode and $I^2C$ digital interface with more controls and monitoring functions.

## 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

- 50 μApp receiver sensitivity for 10-12 BER at 28Gbps
- Better than 2.4mApp overload
- As low as 84mW power consumption per channel
- 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
- 2-wire interface control and analog control modes

## Ordering Information

| Part Number | Temp. Range | Die Dimension |
|---|---|---|
| HXR8212-DNG | -40°C to +105°C | 1975 x 3600 μm |
| HXR8212-EVB | Room Temp | Evaluation Board |

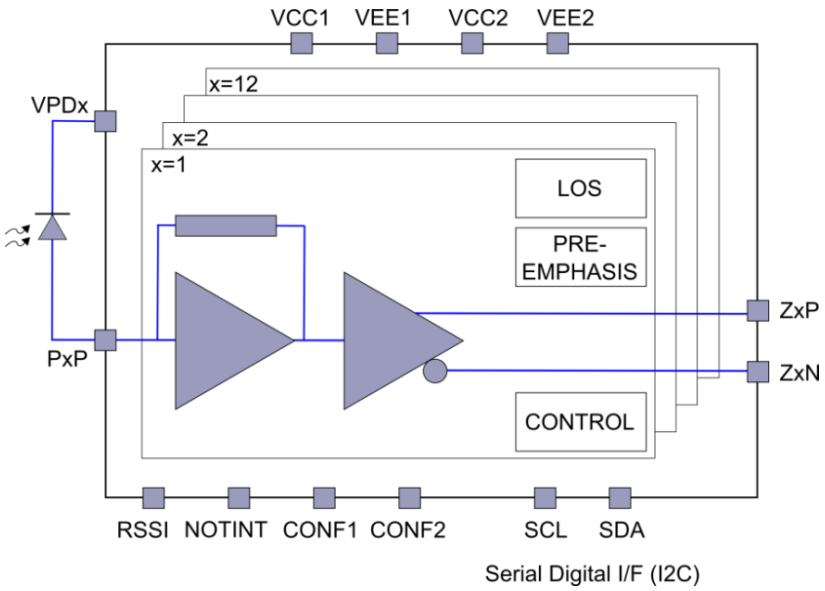


**Figure 1. Block Diagram**

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