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- ▶ GN2024

9.95 - 11.3Gb/s Equalizer plus Clock and Data Recovery
- ▶ GN2023

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Limiting Amplifier plus Clock and Data Recovery IC with Manual Slice Level Adjust

Semtech GN2406

Quad 10Gb/s CDR with Transmit De-Emphasis

Overview

Diagrams & Specs

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The GN2406 is a quad repeater/re-timer device designed to enhance the reach and robustness of high speed serial links by compensating for transmission losses and re-setting the crosstalk and jitter budget.

The GN2406 features Gennum’s proven reference-free CDR architecture which simplifies system design and reduces overall cost. Each channel supports independent locking to data rates from 9.95 - 11.3Gb/s. To enable backward compatibility with legacy data rates, half rate (5Gb/s) and quarter rate (2.5Gb/s) operation is also supported. Other rates can be supported using the re-timer bypass feature.

High sensitivity limiting amplifiers at the input make this device suitable for use in optical modules. Gennum’s proprietary CLEAREDGE™ technology ensures extremely low output jitter. Copper cable or backplane trace losses of up to 28dB can be compensated using the output de-emphasis capability.

Features

- ▶ Automatic locking from 9.95Gb/s to 11.3Gb/s
- ▶ Automatic rate detect for quarter rate (2.5Gb/s) and half rate (5Gb/s) modes
- ▶ Re-timer bypass up to 11.3Gb/s
- ▶ No reference clock required
- ▶ Integrated limiting amplifier, with 10mV to 1600mV differential input voltage range
- ▶ Programmable output, with 400mV to 800mV differential output voltage range
- ▶ Independent channel operation
- ▶ De-emphasis to compensate up to 28dB of loss
- ▶ Polarity inversion
- ▶ I2C control interface
- ▶ Automatically loads configuration data from E2PROM
- ▶ Loss of signal detect with adjustable threshold
- ▶ Low power dissipation
- ▶ Single 3.3V supply
- ▶ 7x7mm, 48-pin QFN package

Applications

- ▶ Active Copper Cable assemblies and optical modules for:

▶ Infiniband® SDR/DDR/QDR

▶ 40Gb/s and 100Gb/s Ethernet
- ▶ Re-timer on line card for:

▶ QSFP modules

▶ Parallel optical modules

▶ SFP+ modules
- ▶ 10Gb/s serial backplane retimer

Order Codes

Part No	Package
GN2406-INE3	48 pin QFN