

RG8G7147A

4 x 128Gbaud Linear Differential I/O Driver

The RG8G7147A is a low-power, high-performance, 128Gbaud quad-channel linear driver chip designed for 800Gbps and beyond optical integrated transmitter small-form factor (SFF) modules for metro and long-haul applications.

The RG8G7147A integrates analog control and digital (through an SPI interface) control circuitry for precise, independent driving level control and monitoring. Each driver channel has 100Ω differential AC-coupled input and 60Ω differential interface with an open collector type output stage, suitable for InP based and Silicon Photonics based Mach-Zehnder modulators.

Applications

- 800G and beyond advanced multi-level QAM modulation systems
- High-bandwidth small form factor optical integrated modules

Features

- 90GHz 3dB bandwidth with 72GHz peaking frequency
- 11dB (typical) of peaking to compensate for package and modulator losses
- > 10dB dynamic range of gain control
- 3.0W (typical) power consumption for 2.5Vppd output voltage swing
- AC-coupled 100Ω differential input
- Open-collector configuration output stage which can drive DC-coupled 60Ω differential
- Ultra-low inter-channel crosstalk
- Precise analog and digital monitoring and control of gain and output voltage swing
- < 1MHz low-frequency cutoff
- Optical Internetworking Forum (OIF)-compliant Serial Peripheral Interface (SPI) for programmability

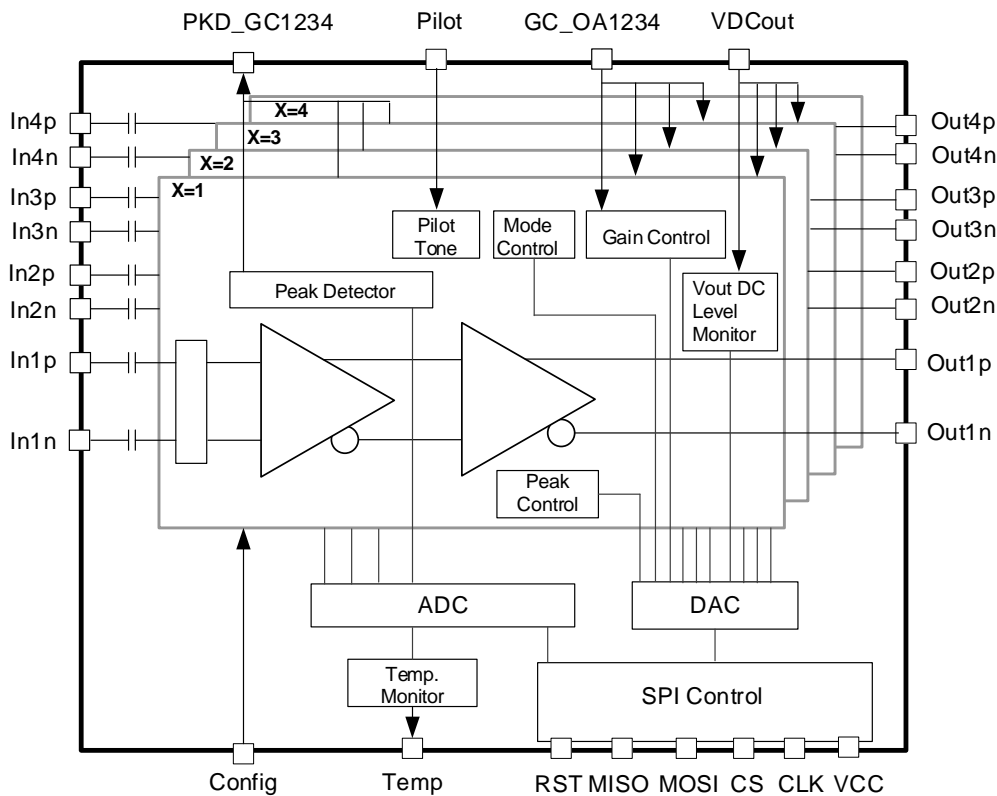


Figure 1. Block Diagram

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