

IPTA3X4 PRODUCT BRIEF

Introduction

IPTA3X4 is a 12-channel, high performance, low power transimpedance amplifier for broadband optical interconnect.

It features twelve independent transimpedance amplifiers with a common serial digital management interface for configuration and monitoring.

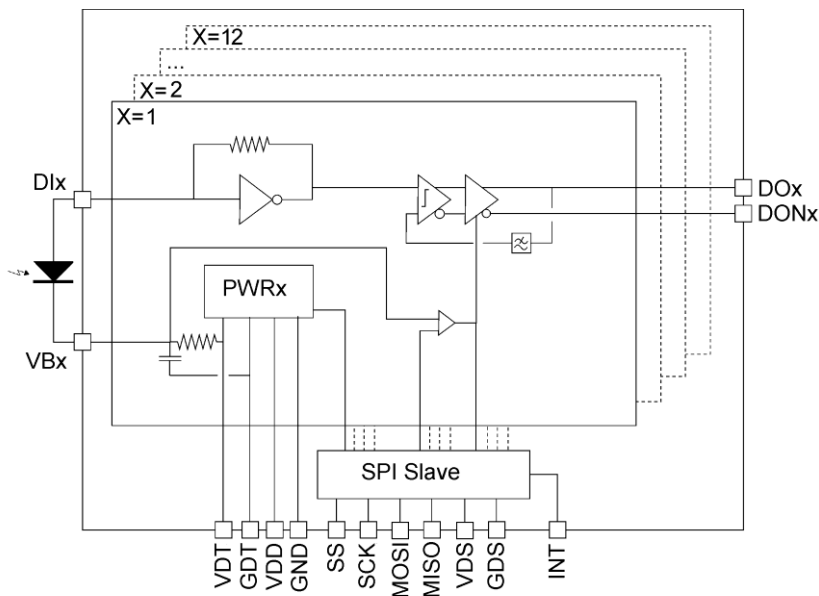


Figure 1 – Block Diagram

Each channel has a selectable squelch function which can turn off the output and generate an interrupt when no valid input signal is available.

The device is available as known-good-die. Evaluation boards are available for quick and easy performance verification

Features

- 12x12.5 Gbit/s TIA/LIA
- 10 GHz typical 3 dB BW
- Power dissipation 65 mW per channel (total power including termination and PD)
- >17 kohm transimpedance
- Programmable pre-emphasis
- Integrated limiting amplifier
- Programmable output swing
- Serial digital management interface (SPI) for individual control and status read-out
- Automatic output squelch with interrupt flag
- 30dB isolation between channels
- Die size 2450 x 3800 um

Applications

- Parallel Optical Interconnects
- 12-channel optical modules
- Active Cables

APPLICATION DIAGRAM:

IPTA3X4 features 12 individual TIA's that independently support multiple bitrates. Via the SPI management interface, each of the 12 TIA's can be configured with individual settings to accommodate the best possible performance for each channel.

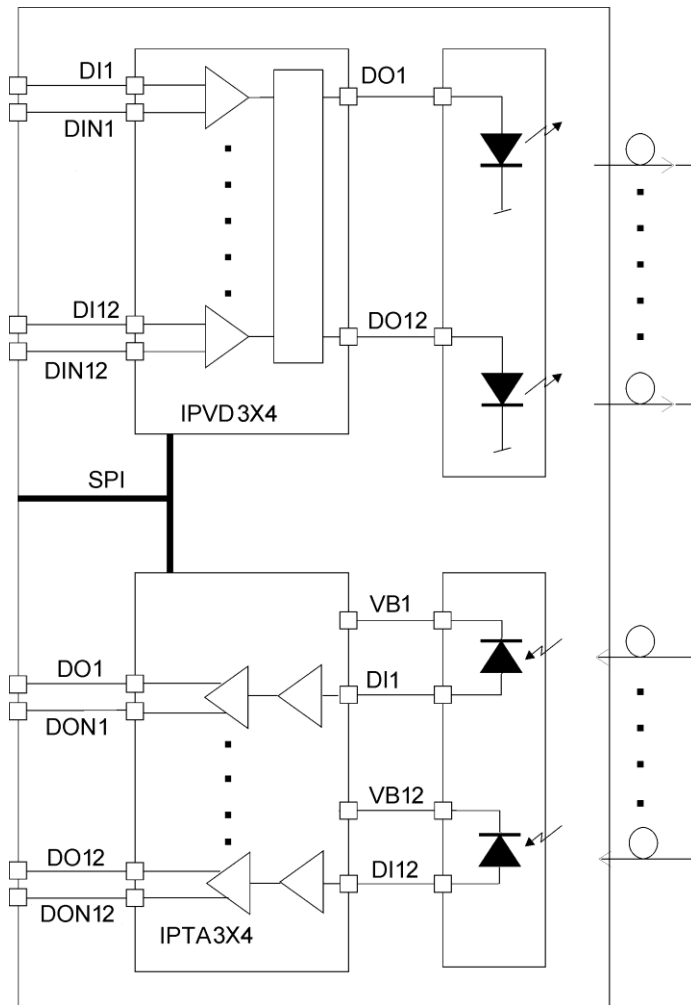


Figure 2 – Application using the IPTA3X4 and IPVD3X4

The IPTA3X4 and its counterpart the VCSEL driver IPVD3X4 form a complementary chip set for a 12-channel transceiver module.

No external components (except the optics) are required for using the IPxx3X4 transceiver devices.

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