

# 128 Gbaud Dual-Channel Differential Input, Linear Transimpedance/Variable-Gain Amplifier

**Part No.**

IN10050TA

**Product Type**

Transimpedance Amplifiers

**Market Segments**

Long Haul/Metro

**Applications**800G/1.2T Coherent Receivers  
Class 60 ICR**Features**

- Supports baud rates up to 128 Gbaud
- Dual-channel monolithic TIA/VGA
- 625  $\mu\text{m}$  channel pitch
- Wide differential electrical gain
- High electrical bandwidth
- Adjustable output amplitude in AGC mode
- Automatic or manual gain control
- Output peak detectors
- Analog control interface
- Low power consumption
- Available in die form

**Description**

The IN10050TA is a dual-channel, differential input, linear transimpedance/ variable-gain amplifier (TIA/ VGA) for 800G and 1.2T coherent detection receivers for long haul and metro networks.

The IN10050TA offers two gain control modes: manual gain control and automatic gain control. In manual mode, the gain is controlled via an external control pin. In automatic mode, the gain is automatically adjusted to deliver a constant output voltage.

The IN10050TA provides linear amplification for very wide input optical power range.

The IN10050TA includes an adjustable peaking feature that allows the user to optimize receiver frequency response for different photodiode and ADC/ DSP combinations.

The IN10050TA has an output peak detector monitoring function.

The IN10050TA operates from a single +3.3 V power supply and is available in die form.