

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

**Part No.**

IN6450TA

**Product Type**

Transimpedance Amplifiers

**Market Segments**

Long Haul/Metro

**Applications**400G/600G Coherent Receivers  
Class 40 ICR**Features**

- Supports baud rates up to 64 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 IN6450TA is a dual-channel, differential linear transimpedance/variable-gain amplifier (TIA/ VGA) for 400G and 600G coherent detection receivers for long haul and metro networks.

The IN6450TA offers two gain control modes: manual and automatic. 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 IN6450TA provides linear amplification for a very wide input optical power range.

The IN6450TA includes an adjustable bandwidth feature that allows the user to optimize receiver frequency response for different photodiode and ADC/DSP combinations.

The IN6450TA has an output peak detector monitoring function.

The IN6450TA operates from a single +3.3 V power supply and is available in die form.