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

<table>
<thead>
<tr>
<th>Part No.</th>
<th>IN6450TA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Product Type</strong></td>
<td>Transimpedance Amplifiers</td>
</tr>
<tr>
<td><strong>Market Segments</strong></td>
<td>Long Haul/Metro</td>
</tr>
</tbody>
</table>
| **Applications** | 400G/600G Coherent Receivers  
Class 40 ICR |

### Features
- Supports baud rates up to 64 Gbaud
- Dual-channel monolithic TIA/VGA
- 625 µm 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.