

## General Description

The HXT42100 is a single channel, low power, Direct Modulated Laser (DML) driver for LR4 parallel optical applications that supports data rates up to 28Gbps and optical reach up to 10km. In conjunction with a DFB laser diode an individual DFB laser diode, the device handles the complete digital-to-optical conversion, including CML input with equalization, laser driver, drive control, and supervision.

Designed for direct DC-coupled die in TOSA applications with a small number of additional components for cost-effective and compact assemblies. Available in die form.

## Applications

- Up to 10km LR 100G-BASE Ethernet modules for datacenters
- Up to 2km CLR 100G-BASE Ethernet modules for datacenters
- 32G Fiber Channel modules to 10km
- InfiniBand EDR optical modules
- Proprietary single channel optical modules

## Features

- 200mW total channel  $P_{DISS}$  if configured for:
  - $I_{MOD} = 50mA_{PP}$
  - $I_{BIAS} = 50mA$
- Supports up to:  $I_{MOD} = 50mA_{PP}$  &  $I_{BIAS} = 50mA$  with  $V_{CC} = 2.5V$
- Programmable Input Equalization
- Input Signal Detect (SD) with Squelch
- Input Polarity Inversion
- Programmable Pulse Width Adjustment
- Programmable Laser Modulation Current Amplitude Peaking and Peaking Duration
- Integrated Temperature Sensor
- Interrupts with User selectable Mask control
- Laser Disable for  $I_{MOD}$  and  $I_{BIAS}$
- 2-wire interface control and symmetric pad design maximize module design flexibility
- QSFP MSA compliant

## Ordering Information

Part	Temp Range	Dimensions
HXT42100-DNU <sup>1</sup> HXT42100-TNU <sup>2</sup>	-5°C to +95°C	Bare Die Design Size: 1300µm x 1070µm Nominal Die Cut Size: 1350µm x 1120µm
HXT42100EVB	Room Temp	Evaluation Board

Notes:

<sup>1</sup> – Waffle Pack

<sup>2</sup> – Blue Tape

For price, delivery schedules, and to place orders, please contact IDT: [www.IDT.com/go/sales](http://www.IDT.com/go/sales)

# Device Diagram

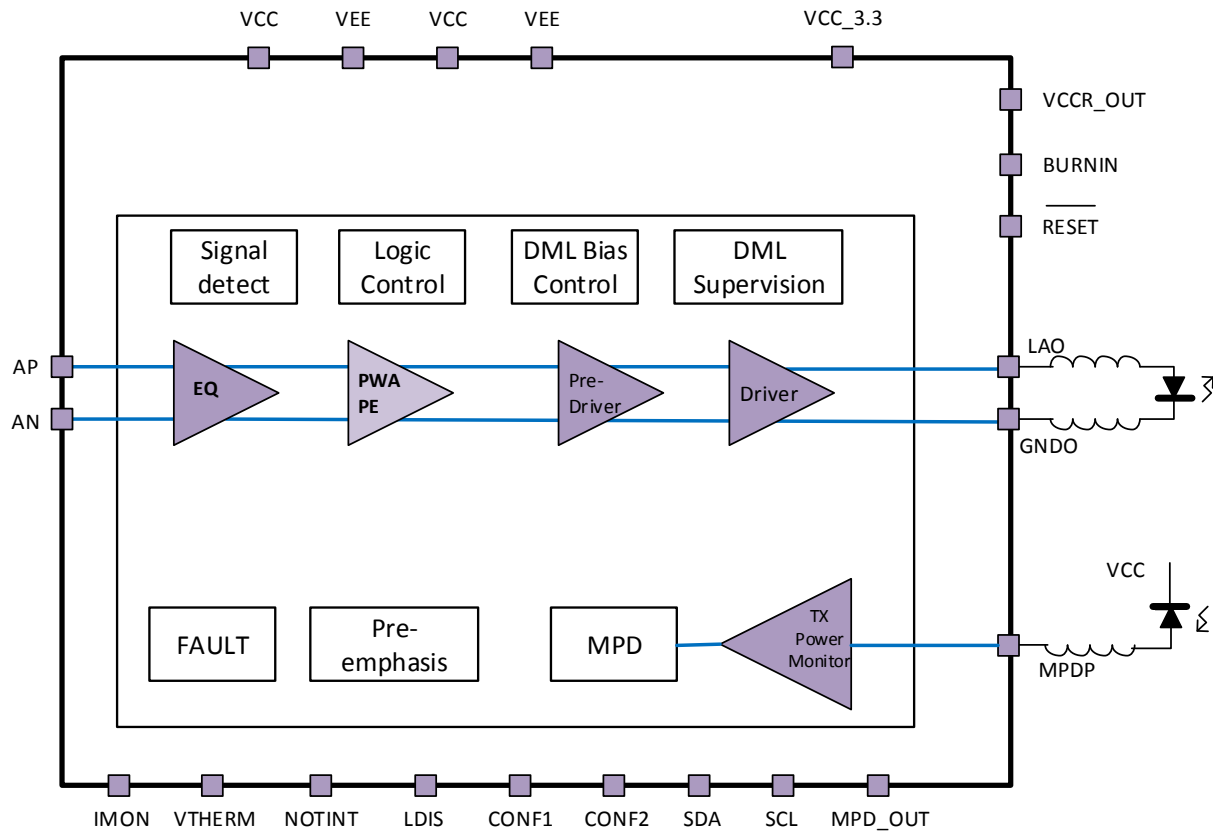


Figure 1: Functional block diagram

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