

## PI3EQX1002B

### 1-Port USB3.1 Gen-2 ReDriver

#### Description

The PI3EQX1002B is a low power, high performance 10.0 Gbps 1-Port USB 3.1 linear ReDriver™ designed specifically for the USB 3.1 protocol. The device provides programmable equalization, linear swing and flat gain to optimize performance over a variety of physical mediums by reducing Inter-Symbol Interference. PI3EQX1002B supports two 100Ω Differential CML data I/O's between the Protocol ASIC to a switch fabric, over cable, or to extend the signals across other distant data pathways on the user's platform.

The integrated equalization circuitry provides flexibility with signal integrity of the signal before the ReDriver. Each channel operates fully independently. The channels' input signal level determines whether the output is active.

The PI3EQX1002B also includes an automatic receiver detect function. The receiver detection loop will be active again if the corresponding channel's signal detector is idle for longer than 7.3mS. The channel will then move to Unplug Mode if load not detected, or it will return to Low Power Mode (Slumber Mode) due to inactivity.

#### Features

- 5 & 10Gbps serial link with linear equalizer.
- USB3.1 and USB3.0 Compatible
- Full Compliancy to USB3.1 Super Speed Standard
- Two 10Gbps differential signal pairs
- Pin Adjustable Receiver Equalization
- Pin Adjustable output linear swing
- Pin Adjustable Flat Gain
- 100Ω Differential CML I/O's
- Automatic Receiver Detect
- Auto "Slumber" mode for adaptive power management
- Single Supply Voltage: 3.3V
- Packaging:
- 30-pin, TQFN 2.5x4.5 mm (ZL30)

#### Application Diagram

