

## PI2EQX510E

1.8V 5.0Gbps, 1-Channel, USB3.0 ReDriver

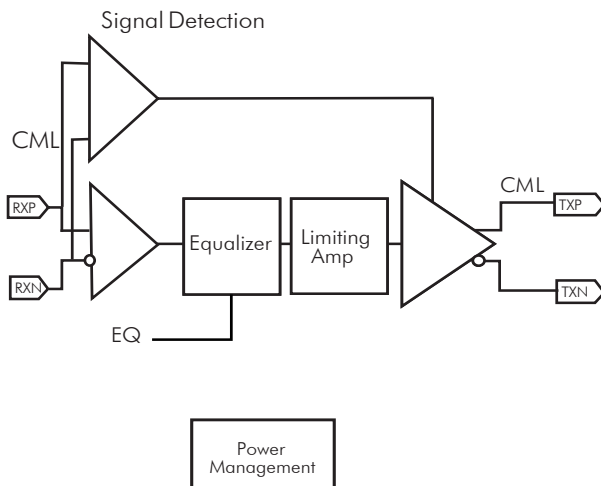
### Description

The PI2EQX510E is a low power, high performance 5.0 Gbps signal ReDriver designed specifically for the USB 3.0 protocol. The device provides programmable equalization and De-Emphasis to optimize performance over a variety of physical mediums by reducing Inter-Symbol Interference.

PI2EQX510E supports one 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. A low-level input signal detection and output squelch function is provided. The channels' input signal level determines whether the output is active.

The PI2EQX510E also includes a 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.

### Block Diagram



### Features

- USB 3.0 compatible
- Full compliancy to USB 3.0 Super Speed standard
- One 5.0Gbps differential signal pairs
- Adjustable Receiver Equalization
- 100Ω Differential CML I/O's
- Pin Configured Output Emphasis Control
- Input signal level detect and squelch function
- Automatic Receiver Detect
- Low Power : ~110mW (typ)
- Auto "Slumber" mode for adaptive power management
- Single Supply Voltage: 1.8V

### Application Diagram

