

PI2EQX862

PCIe 3.0/SATA 3.0, 1-Lane, Combo ReDriver

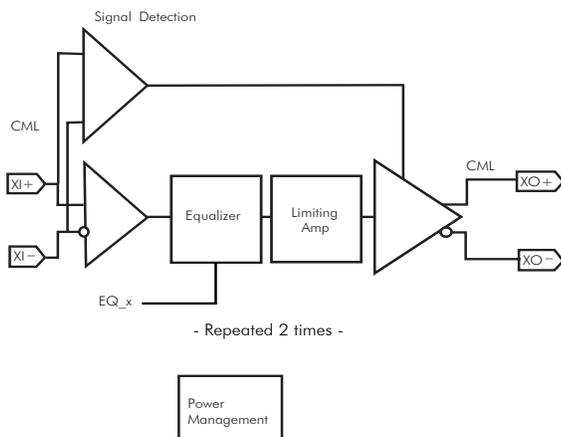
Description

The PI2EQX862 is a low power, cost effective 8.0Gb/s ReDriver designed as a cost effective PCIe 3.0 and/or SATA 3.0 1-Lane solution used mainly with M.2 or SATAe connectors for HDD/SSD. The device provides programmable equalization to optimize performance over a variety of physical mediums by reducing Inter-Symbol Interference. PI2EQX862 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. A low-level input signal detection and output squelch function is provided for each channel. Each channel operates fully independently. The channels' input signal level (on XI+/-) determines whether the output is active. If the input signal level of the channel falls below the active threshold level (Vth-) then the outputs are driven to the common mode voltage.

The PI2EQX862 is a flexible, multi-protocol redriver/repeater, designed to support new processor chipsets with dual protocol I/O pins, supporting both PCIe 3.0 8Gb/s and SATA 3.0 6.0Gb/s speeds and connectors such as mSATA/ M.2/ SATAe that can provide control signals. The PI2EQX862 is also an excellent choice for single lane PCIe 3.0 applications requiring low power and small package, such as docking station connectivity.

Block Diagram



Features

- PCIe 3.0 and SATA 3.0 compatible
- Two 8.0Gbps differential signal pairs
- Adjustable Receiver Equalization
- Pin configured output emphasis control for PCIe only
- 100Ω Differential CML I/O's
- Input signal level detect and squelch for each channel
- Low Power : Active Mode 120mW
- Single Supply Voltage: 1.2V
- Packaging: 18-Pin TQFN 2 x 2 mm
- Auto Slumber mode
- Auto Sensing mode from SATAe/mSATA/M2 connector

Application Diagram

