A product Line of
Diodes Incorporated

PRODUCT BRIEF

PI2EQX5964

5.0Gbps 4-Lane PCIe® 2.0 ReDriver with Equalization, Emphasis, & I²C Control

Description

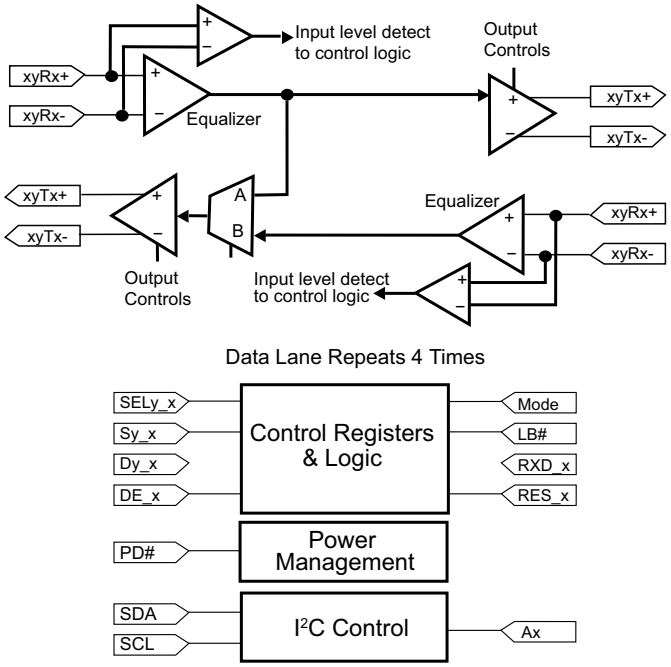
The PI2EQX5964 is a low power, PCIe® compliant signal redriver. The device provides programmable equalization, amplification, and de-emphasis by using 8 select bits, to optimize performance over a variety of physical mediums by reducing Inter-symbol interference.

PI2EQX5964 supports eight 100-Ohm Differential CML data I/O's between the Protocol ASIC to a switch fabric, across a backplane, or extends the signals across other distant data pathways on the user's platform.

The integrated equalization circuitry provides flexibility with signal integrity of the PCI Express signal before the ReDriver, whereas the integrated de-emphasis circuitry provides flexibility with signal integrity of the signal after the redriver.

In addition to providing signal re-conditioning, Diodes' PI2EQX5964 also provides power management Stand-by mode operated by a Bus Enable pin.

Application Diagram



Features

- Up to 5.0Gbps PCI Express® 2.0 Serial ReDriver
- Supporting 8 differential channels or 4 lanes of PCIe Interface
- I²C configuration controls (3.3V tolerant)
- Adjustable receiver equalization and transmitter de-emphasis and output levels
- Variable input and output termination
- 1:2 channel broadcast
- Channel loop-back/Mux and Demux Mode
- Electrical Idle fully supported
- Receiver detect and individual output control
- Fine adjustment of electrical idle threshold via I²C
- Single supply voltage, 1.2V ± 0.05V
- Power down modes
- Industrial Temp support, -40°C ~ +85°C
- Packaging: 56-contact TQFN, Pb-free & Green