

## PI3EQX8908A1

2.5Gbps/5.0Gbps/8.0Gbps 8-channel PCI Express ReDriver™ with Linear Equalization

### Description

Diodes' PI3EQX8908A1 is a PCIe, 8 differential channels ReDriver™. The device provides programmable linear equalization, output swing and gain, by either pin strapping option or I<sup>2</sup>C Control, to optimize performance over a variety of physical mediums by reducing Inter-symbol interference.

The PI3EQX8908A1 supports eight 100-Ohm Differential CML data I/O's and extends the signals across other distant data pathways on the user's platform.

The programmable settings can be applied easily via pins or software (I<sup>2</sup>C).

The PI3EQX8908A1 offers fully Linear Transfer function to fully comply with all PCIe 3 Link Training signals.

### Features

- 2.5/5.0/8.0Gbps serial link with linear equalizer
- Support PCIe Gen 1/2/3 protocol
- Supporting 8 differential channels
- Independent channel configuration of receiver equalization, output swing and flat gain
- Per Channel Activity Detector with selectable input termination between 50Ω to V<sub>DD</sub> and 200KΩ to V<sub>DD</sub>
- Per Channel Output Termination Detector on power up with selectable output termination between 50Ω to V<sub>DD</sub> and High impedance
- Very linear transfer function
- Fully compliant to PCISIG Link Training
- Single-ended mode receiver detection for PCIe
- Input Threshold detection
- Pin strap and I<sup>2</sup>C slave selectable device programming
- 4-bit selectable address bit for I<sup>2</sup>C
- Supply Voltage: 3.3V±0.3V
- Industrial Temperature Range: -40°C to 85°C
- Packaging (Pb-free & Green):
  - 54-contact TQFN (10mm x 5.5mm x 0.5mm pitch)
  - flowthrough pinout

### Eye Diagram

