



**THE DATASHEET OF
PI3EQX8904ZHEX**



PI3EQX8904

4-channel PCIe 2.5/5/6/8Gbps ReDriver with Linear Equalization, PCIe3/SATA3

Description

The PI3EQX8904 is a 4 differential channel ReDriver. The device provides programmable linear equalization, output swing and gain, by either pin strapping option or I²C Control, to optimize performance over a variety of physical mediums by reducing Inter-symbol interference.

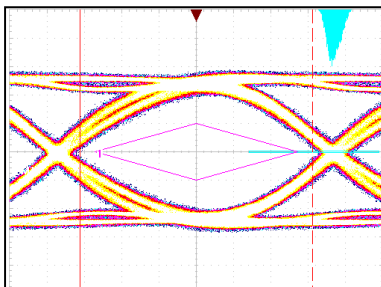
The PI3EQX8904 supports four 100-Ohm Differential CML data I/O's and extends the signals across other distant data pathways on the user's platform.

The programmable settings can be applied easily via pins, software (I²C) or loaded via an external EEPROM. When operating in the EEPROM mode, the configuration information is automatically loaded on power up, which eliminates the need for an external microprocessor or software driver.

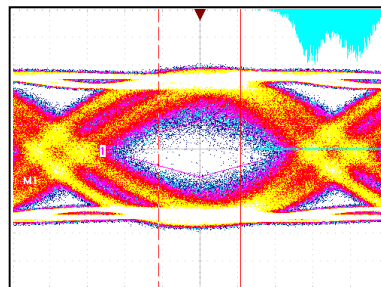
Features

- Support PCIe Gen 1/2/3 protocol, SATA3 Supporting 4 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_{CC} and 200KΩ to V_{CC}
- Per Channel Output Termination Detector on power up with selectable output termination between 50Ω to V_{CC} 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 I²C master/slave selectable device programming
- 4-bit selectable address bit for I²C
- Supply Voltage: 3.3V±0.3V
- Industrial Temperature Range: -40°C to 85°C
- Packaging (Pb-free & Green):
 - 42-contact TQFN (9mm x3.5mm) - flowthrough pinout

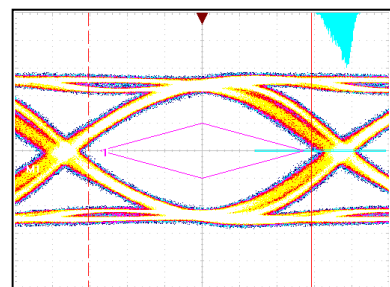
Eye Diagram



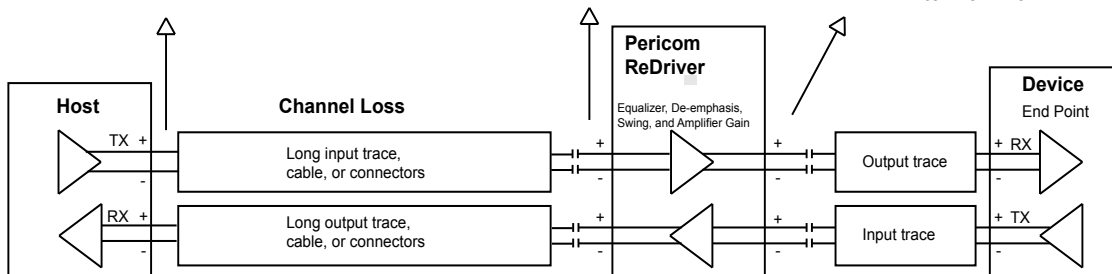
Before Channel Loss



Before ReDriver



After ReDriver



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