

**PRODUCT BRIEF**

**SIGNAL INTEGRITY SOLUTIONS**

**PI3EQX12902B**

**12.5Gbps 1 Port/2 Channels PCIe3.0/SAS3/SATA3/10GE KR Combo ReDriver with Linear Equalization**

**Description**

Pericom Semiconductor's PI3EQX12902B is a low power, high performance 12.5 Gbps 2 channels PCIe3.0/SAS3/SATA3/10GE KR linear ReDriver™.

The device provides programmable equalization, linear swing and flat gain to optimize performance over a variety of physical mediums by reducing Inter-Symbol Interference.

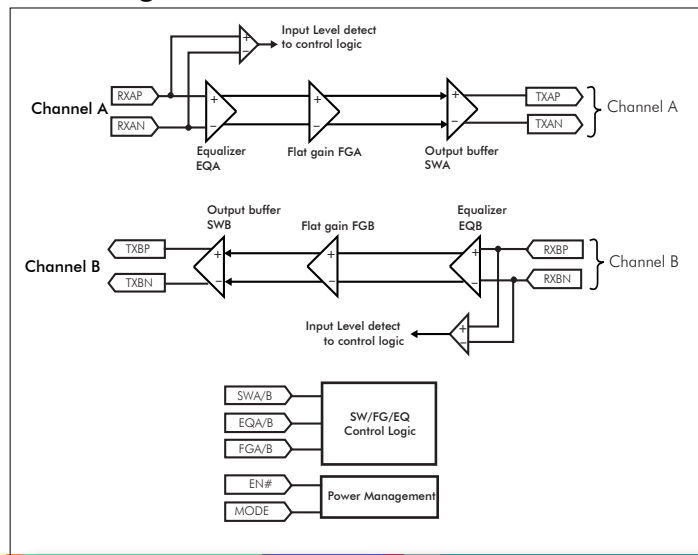
PI3EQX12902B supports two 100Ω Differential CML data I/O's between the Protocol ASIC to a switch fabric, over cable, or to extend the signals across other distant data pathways on the user's platform.

The integrated equalization circuitry provides flexibility with signal integrity of the signal before and after the ReDriver.

Each channel operates fully independently. The channels' input signal level determines whether the output is active.

The PI3EQX12902B is a flexible, multi-protocol linear ReDriver designed to support new processor chipsets with dual protocol I/O pins, supporting PCIe3 8Gbps/SAS3 12Gbps/SATA3 6Gbps speeds and connectors such as mSATA/M.2/U.2/SATAe. The PI3EQX12902B is also an excellent choice for single lane applications requiring low power and small package such as docking station connectivity.

**Block Diagram**



**Features**

- 12.5Gbps serial link with linear equalizer.
- Two 12.5Gbps differential signal pairs
- Support SAS3/SATA3 and PCIe3 protocols
- Transparent to link training, OOB, Idle
- Pin Adjustable Receiver Equalization
- Pin Adjustable output linear swing
- Pin Adjustable Flat Gain
- 100Ω Differential CML I/O's
- Auto receiver detection for adaptive power management
- Auto "low power" mode for adaptive power management
- Single Supply Voltage: 3.3V ± 0.3V
- Industrial Temperature range: -40°C to 85°C
- Packaging: (Pb-free & Green)
- 30-pin, TQFN 2.5x4.5 mm (ZL30)

**Applications**

- Rack server
- Notebook PC
- Server motherboards
- JBOD storage
- Blade server

