PI3EQX12902A

8Gbps 1 Port/2 Channels PCIe3/SATA3 Combo ReDriver with Linear Equalization

Description

PI3EQX12902A is a low power, high performance 8Gbps 2 channels PCIe3/SATA3 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. PI3EQX12902A 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.
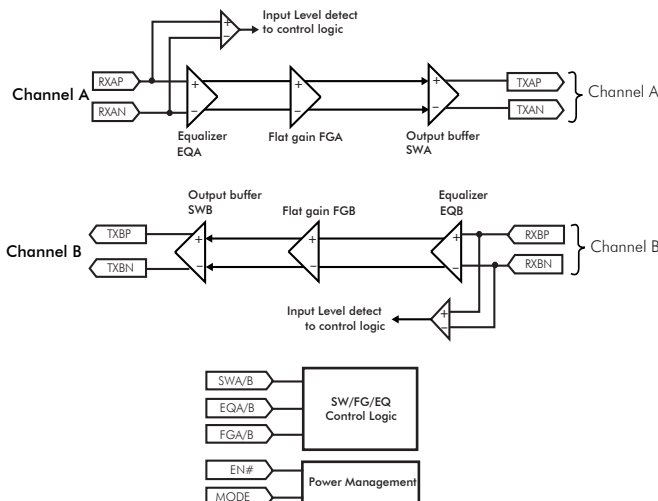
The integrated equalization circuitry provides flexibility with signal integrity of the signal before and after the ReDriver.

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

The PI3EQX12902A is a flexible, multi-protocol linear ReDriver designed to support new processor chipsets with dual protocol I/O pins, supporting PCIe3 8Gbps, SATA3 6Gbps speeds and connectors such as mSATA/M.2/SATAe/U.2 that can provide control signals.

The PI3EQX12902A is also an excellent choice for single lane applications requiring low power and small package such as docking station connectivity.

Features

→ 8Gbps serial link with linear equalizer
→ Two 8Gbps differential signal pairs
→ Support PCIe3/SATA3 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

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

Block Diagram

Application Diagram