PI2EQX6812

6.5Gbps 2-Lane (4-channel)SAS2/SATA/XAUI ReDriver™ with Equalization & De-emphasis

Pericom Semiconductor's PI2EQX6812 is a low power, SAS2, 2-lane (4 differential channels) SATA, XAUI signal ReDriver™. The device provides programmable equalization, amplification, and de-emphasis by either pin strapping option or I²C Control, to optimize performance over a variety of physical mediums by reducing Inter-symbol interference.

PI2EQX6812 supports four 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 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, Pericom's PI2EQX6812 also provides power management Stand-by mode operated by a Power Down pin, or through I²C register. When the input is idle, the device goes to power saving slumber mode
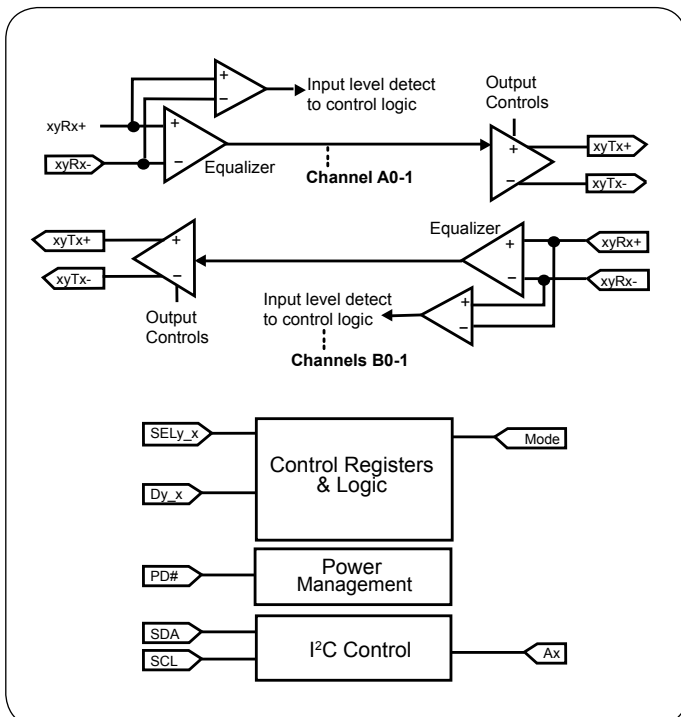
Features

- Up to 6.5Gbps SAS2/SATA/XAUI ReDriver™
- Supporting 4 differential channels or 2 lane
- Independent channel configuration
- Pin strap and I²C configuration controls (3.3V Tolerant)
- Adjustable receiver equalization
- Adjustable transmitter amplitude and de-emphasis
- Adjustable input threshold level
- 50-Ohm input/output termination
- Mux/Demux and loop-back features
- OOB fully supported
- Single supply voltage, 1.2V ± 0.05V
- Active current per channel -95mA (typical)
- Power down standby mode
- Standby current -1mA (typical)
- Automatic slumber mode power savings
- Slumber current per channel -10mA (typical)
- Packaging (Pb-free & Green):
- 42-contact TQFN (9mm x3.5mm)

Block Diagram

Applications

- Data Center Server, Blade server, Storage System

SATA3.0/SAS2.0 6Gbps 4-Port ReDriver in Storage Array Application