PERICOM®

PI2EQX6874
6.5Gbps 4-Lane SAS2/SATA3/XAUI ReDriver™with Equalization, De-emphasis and Flow-through pinout

Pericom Semiconductor's PI2EQX6874 is a 6.5Gbps low power, 4 lane (8-channel) SAS2, SATA3, XAUI signal ReDriver. The device provides programmable equalization, amplification, and de-emphasis by I²C control, to optimize performance over a variety of physical mediums by reducing Inter-symbol interference.

PI2EQX6874 supports eight 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 PI2EQX6874 also provides power management Stand-by mode operated by a Power Down pin, or through I²C register. When input is idle, the device goes into power saving Slumber mode.
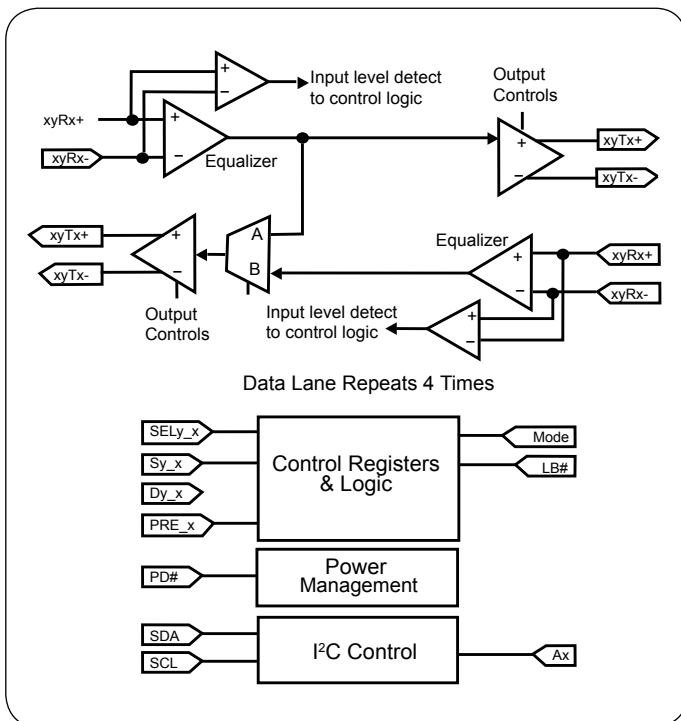
Features

- Up to 6.5Gbps SAS2/SATA3/XAUI ReDriver
- Supporting 8 differential channels or 4 lanes
- Per channel I2C configuration controls (3.3V Tolerant)
- Adjustable receiver equalization
- Adjustable transmitter amplitude and de-emphasis
- 50-Ohm input/output termination
- Mux/Demux feature
- Channel loop-back
- OOB fully supported
- Single supply voltage, 1.2V ± 5%
- Active Current per channel - 95mA (typical)
- Power down modes
- Slumber current per channel -10mA (typical)
- Standby current -1mA (typical)
- Industrial temperature range: -40°C to 85°C
- Packaging: 56-contact TQFN (5mm x 11mm)

Block Diagram

Applications
- Data Center Server, Blade server, Storage System

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