

PI2EQX6814

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

Pericom Semiconductor's PI2EQX6814 is a 6.5Gbps low power, 4 lane (8 channel) SAS2, SATA, XAUI signal ReDriver™. The device provides programmable equalization, amplification, and de-emphasis by either pin strapping or I²C control, select bits, to optimize performance over a variety of physical mediums by reducing Inter-symbol interference.

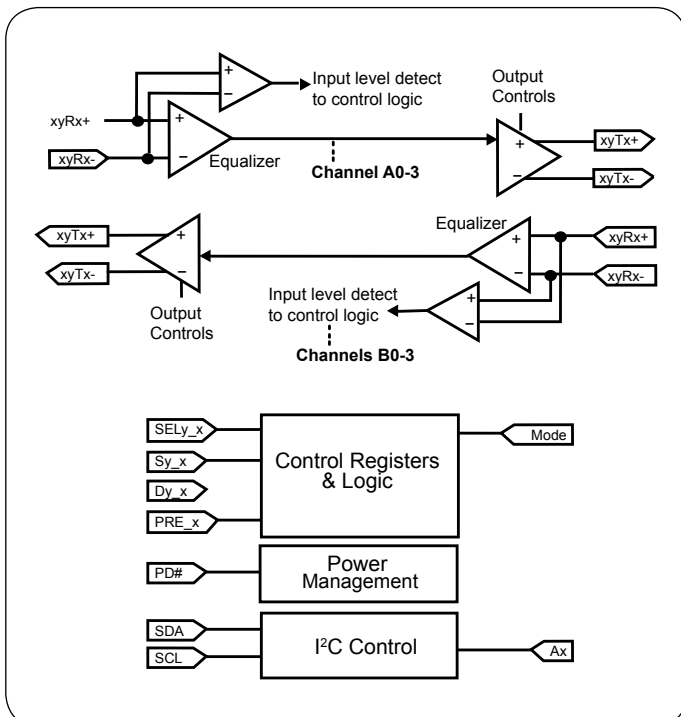
PI2EQX6814 supports eight 100-Ohm Differential CML data I/O's between the Protocol ASIC to a switch fabric, across a backplane, or extends the signals across other distant data pathways on the user's platform.

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 PI2EQX6814 also provides power management Stand-by mode operated by a Power Down pin, or through I²C register.

In addition, the device performs automatic Slumber Mode (Disable Transmit) during idle conditions on the receiver.

Block Diagram



Features

- Up to 6.5Gbps SAS2/SATA/XAUI ReDriver™
- Supporting 8 differential channels or 4 lanes
- Independent channel configuration
- Pin strapped 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 ± 5%
- Active Current per channel - 95mA (typical)
- Automatic slumber mode power savings
- Slumber current per channel -10mA (typical)
- Power down Standby Mode
- Standby current -1mA (typical)
- Industrial temperature range: -40°C to 85°C
- Packaging (Pb-free & Green):
- 100-contact LFBGA (11mm x11mm)

Applications

- Data Center Server, Blade server, Storage System

