

## PI2EQX6804-A

### 6.5Gbps, 4-lane, SAS2.0/SATA3.0/XAUI ReDriver™ with Equalization & Emphasis

Pericom Semiconductor's PI2EQX6804-A is a low power, SAS2, SATA, XAUI signal ReDriver™. The device provides programmable equalization, amplification, and emphasis by using 8 select bits, to optimize performance over a variety of physical mediums by reducing Inter-symbol interference.

PI2EQX6804-A supports eight 100Ω 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 emphasis circuitry provides flexibility with signal integrity of the signal after the ReDriver.

In addition to providing signal re-conditioning, Pericom's PI2EQX6804-A also provides power management stand-by mode operated by a power-down pin.

### Block Diagram



### Features

- Up to 6.5Gbps SAS2/SATA/XAUI ReDriver™
- Supporting 8 differential channels or 4 ports
- Pin strapped and I²C configuration controls (3.3V Tolerant)
- Adjustable receiver equalization
- Adjustable transmitter amplitude and emphasis
- 50Ω input/output termination
- Mux/Demux feature
- Channel loop-back
- OOB fully supported
- Single supply voltage, 1.2V ± 0.05V
- Power down modes
- Packaging (Pb-free & Green):
  - 100-contact LFBGA

### Applications:

- Server
- Workstation
- Data Storage

Figure 1



Figure 1

Redrivers with emphasis and equalization signal conditioning technology ensure the integrity of high-frequency SAS2.0/SATA3.0 signals by opening closed signal eyes to recover data and meet strict compliance testing requirements. Increased signal margin also supports longer drive lengths over even low-quality cables