

PI3EQX4951ST

3.3V, 1-port, SATA2 i/m ReDriver™ with Analog/Digital Configuration

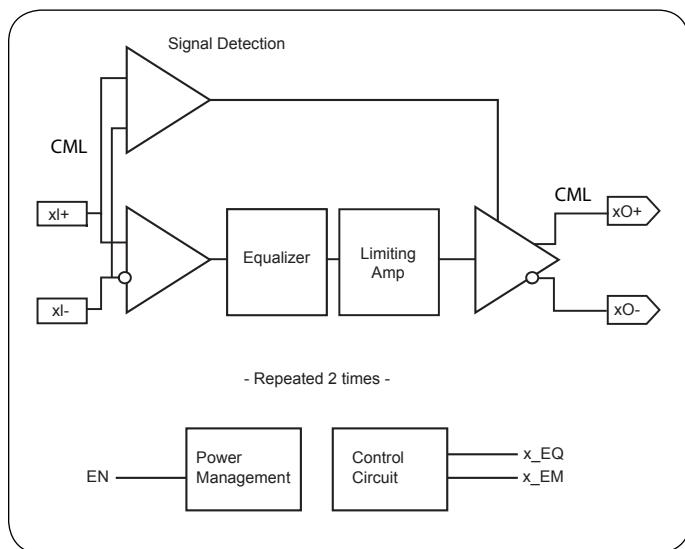
Pericom Semiconductor's PI3EQX4951ST is a low power, signal ReDriver™. The device provides programmable equalization, to optimize performance over a variety of physical mediums by reducing Inter-Symbol Interference. PI3EQX4951ST supports two 100Ω Differential CML data I/O's between the Protocol ASIC to a switch fabric, across a backplane, 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 the ReDriver.

A low-level input signal detection and output squelch function is provided for each channel. Each channel operates fully independently. When the channels are enabled (EN=1) and operating, that channel's input signal level (on $x_{I+/-}$) determines whether the output is active. If the input signal level of the channel falls below the active threshold level (V_{th-}) then the outputs are driven to the common mode voltage.

In addition to signal conditioning, when EN = 0, the device enters a low power standby mode.

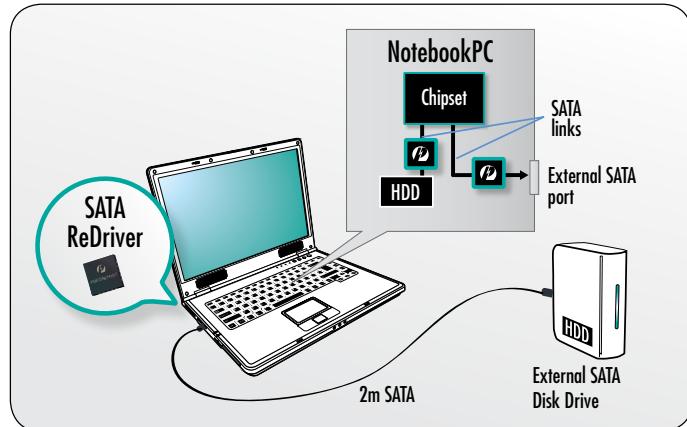
Block Diagram



Features

- SATA2 i/m; external SATA2
- Two 3.0Gbps differential signal pairs
- Independent Digital Output Emphasis Control
- 100Ω Differential CML I/O's
- Input signal level detect and squelch for each channel
- OOB Support
- Enhanced Mode Features:
 - Adjustable Receiver Equalization
 - Independent Analog Output Emphasis Control
- High impedance I/O termination in standby mode
- Low Power Operation: 300mW typical
- Auto-Slumber Mode: 33mW typical
- Power down Stand-by Mode: 0.1mW
- Supply Voltage: 3.3V ±10%
- Packaging: 20-TQFN (4x4mm)

Application of PI3EQX4951ST in NB PC application



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