

PI2EQX8814A/8814A-F

10Gbps 4-Lane ReDriver™ with Equalization & Emphasis

Pericom Semiconductor's PI2EQX8814A/A-F is a low power 10Gbps ReDriver™. The device provides programmable equalization, pre-emphasis, and output voltage swing control via configuration pins to optimize over a variety of physical mediums by reducing Inter-symbol interference (ISI). The PI2EQX8814A/A-F also provides advanced features such as bi-directional loop back functionality for easy debug, a selectable signal detector threshold, and I2C/SMBus programmability just to name a few.

The integrated equalization circuitry provides flexibility with signal integrity of the 10Gbps signal before the ReDriver, whereas the integrated pre-emphasis circuitry provides flexibility with signal integrity of the signal after the ReDriver. In addition to providing signal reconditioning, Pericom's PI2EQX8814A/A-F also provides power management Stand-by mode operated by a Power Down pin.

The PI2EQX8814A/A-F is ideal for enabling longer 10Gbps PCB traces or cables in 10GbE, OC-192 and similar protocols.

Features

- 8 differential channels, support x4 lane 10Gbps such as 10GbE KR and XFI applications, and 4 x 10GbE = 40GbE.
- Selectable adjustment of receiver equalization, output swing, transmit pre-emphasis and transmit preshoot.
- Selectable input termination between 50Ω to VDD and Hi-Z
- Selectable output termination between 50Ω to VDD and 2KΩ to VDD
- Control on Standby and output enable
- Configurability (Pin Strap) via select pin
- 3-bit selectable address bits for I2C
- Support I2C and SMBus format
- Single supply: 1.5V
- Industrial temperature range: -40 to 85°C
- Packaging (Pb-free & Green): 100-contact LBGAs (NJ)
- Both interleave (8814A) and flow through (8814A-F) pinout options.

Block Diagram - Sample Application

