Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832
Email & Skype: info@chipsmall.com Web: www.chipsmall.com
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

PI2EQX8864A
8.0Gbps 4-Lane PCIe® 3.0 ReDriver™ with Equalization & Emphasis

Pericom Semiconductor's PI2EQX8864A is a low power PCIe® 3.0 (8Gbps) ReDriver™. The device provides programmable equalization, pre-emphasis, preshoot, and output voltage swing control via configuration pins to optimize over a variety of physical mediums by reducing Inter-symbol interference (ISI). The PI2EQX8864A also provides advanced features such as bidirectional loop back functionality for easy debug, a selectable signal detector threshold, and full I2C/SMBus programmability just to name a few.
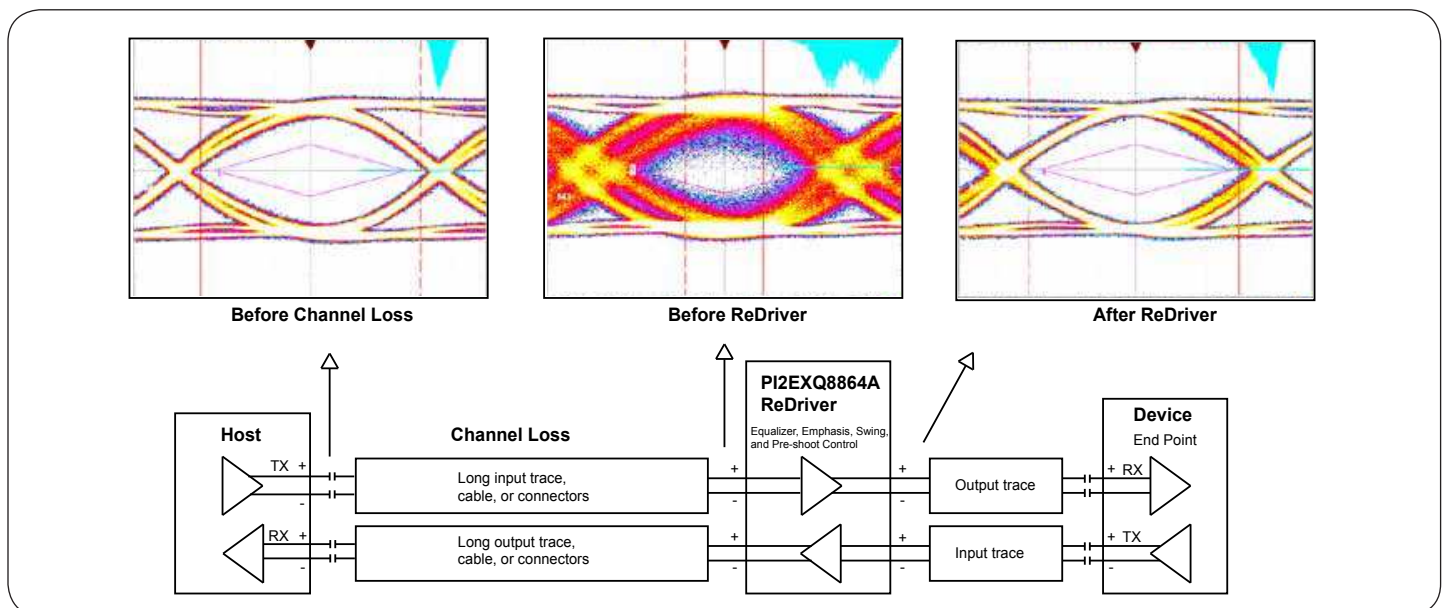
The integrated equalization circuitry provides flexibility with signal integrity of the PCIe signal before the ReDriver, whereas the integrated pre-emphasis circuitry provides flexibility with signal integrity of the signal after the ReDriver. In addition to providing signal reconditioning, Pericom's PI- 2EQX8864A also provides power management Stand-by mode operated by a Power Down pin.

The PI2EQX8864A is ideal for enabling longer PCIe 3.0 PCB traces or cables with multiple connectors, riser card, and end point cards in server, storage, networking, and embedded platforms.

Features

- 8 differential channels, support x4 lane PCIe® 1.0/2.0/3.0 application
- Fully Compatible with PCIe® 3.0 compliant channels
- Optimized for I2C/SM Bus programming
- 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
- Dual programmability between I2C/SMBus and Pin Configurability via select pin
- 3-bit selectable address bits for I2C
- Support I2C and SMBus format
- 1-bit threshold adjustment for signal detector
- Single supply: 1.5V
- Packaging (Pb-free & Green): 72-contact TQFN (ZL)

Block Diagram

Before Channel Loss   Before ReDriver   After ReDriver

PI2EXQ8864A ReDriver — Equalizer, Emphasis, Swing, and Pre-shoot Control

Host — TX +, RX +

Channel Loss — Long input trace, cable, or connectors / Long output trace, cable, or connectors
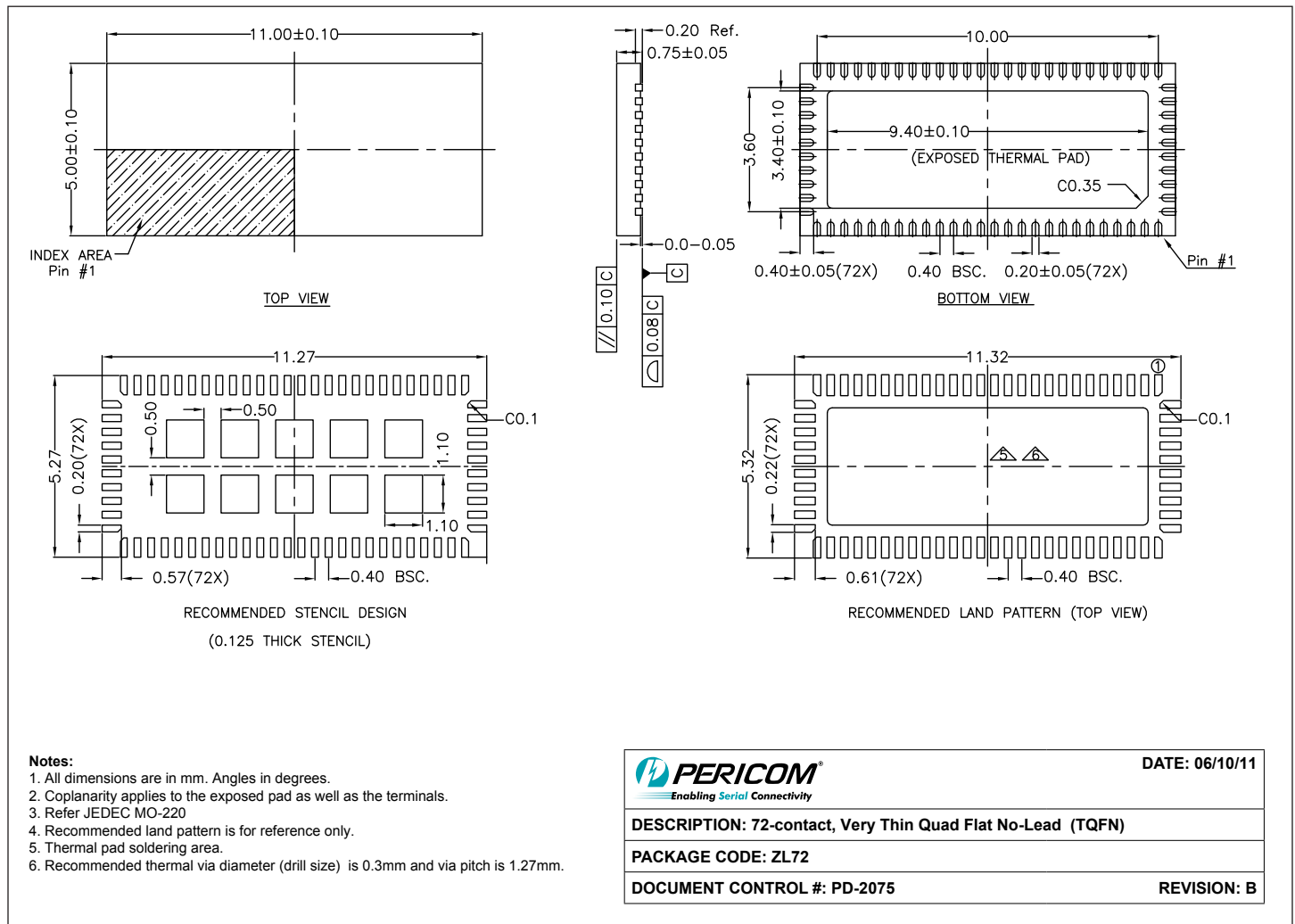
Output trace / Input trace

Device — End Point — + RX / + TX

PI2EQX8864A
8.0Gbps 4-Lane PCIe® 3.0 ReDriver™ with Equalization & Emphasis

Packaging Mechanical: 72-Contact TQFN (ZL)

TOP VIEW

BOTTOM VIEW

RECOMMENDED STENCIL DESIGN
(0.125 THICK STENCIL)

RECOMMENDED LAND PATTERN (TOP VIEW)

Notes:
1. All dimensions are in mm. Angles in degrees.
2. Coplanarity applies to the exposed pad as well as the terminals.
3. Refer JEDEC MO-220
4. Recommended land pattern is for reference only.
5. Thermal pad soldering area.
6. Recommended thermal via diameter (drill size) is 0.3mm and via pitch is 1.27mm.

PERICOM®
Enabling *Serial* Connectivity

DATE: 06/10/11

DESCRIPTION: 72-contact, Very Thin Quad Flat No-Lead (TQFN)

PACKAGE CODE: ZL72

DOCUMENT CONTROL #: PD-2075   **REVISION: B**

Ordering Information

Ordering Number	Package Code	Package Description
PI2EQX8864AZLE	ZL	Pb-free and Green 72-Contact TQFN

- Thermal characteristics can be found on the company web site at www.Pericom.com/Packaging/
- E = Pb-free and Green
- X suffix = Tape/Reel