Chipsmall

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!

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PERICOM®

PI3EQX8908/8984

2.5Gbps/5.0Gbps/8.0Gbps 8-channel PCI Express ReDriver™ with Equalization & De-emphasis

Pericom Semiconductor's PI3EQX8908/8984 is a PCI Express Gen1/2/3 8-differential channels ReDriver™.

The device provides per channel programmable equalization, output swing, de-emphasis, and amplifier gain.

The PI3EQX8908/8984 provides master / slave I^{2}C Control, to optimize performance over a variety of physical mediums by reducing Inter-symbol interference.

PI3EQX8908/8984 supports eight 100-Ohm differential data I/O's and extends the signals across other distant data pathways on the user's platform.

Pericom PI3EQX8908/8984 offers programmable transmit de-emphasis (up to 9 dB), transmit VOD (up to 1200 mVp-p) and receive equalization (up to 32.6 dB) to enable longer distance transmission in lossy copper cables (10m+), or backplanes (40"+) with multiple connectors. The receiver is capable of opening an input eye that is completely closed due to inter-symbol interference (ISI) introduced by the interconnect medium.

The programmable settings can be applied easily via pins, software (I^{2}C) or loaded via an external EEPROM.

When operating in the EEPROM mode, the configuration information is automatically loaded on power up, which eliminates the need for an external microprocessor or software driver.

Features

→ Support up to 8Gbps serial link

→ Supporting 8 channels in Flowthrough pin-out (54-pin PI3EQX8908) and 4 bi-directional lanes (72-pin PI3EQX8984)

→ Independent channel configuration of receiver equalization, output swing, de-emphasis, and amplifier gain

→ Per Channel Activity Detector with selectable input termination between 50Ω to V$_{DD}$ and > 200KΩ

→ Per channel output termination detect on power-up with selectable output termination between 100Ω differential and High Impedance

→ Pin strap and I^{2}C master / slave selectable device programming with external EEPROM

→ 4-bit selectable address bit for I^{2}C

→ Hot Plug Detect – allows host to reset if end point is removed (see note 1)

→ Supply Voltage: 3.3V±10%

→ Packaging (Pb-free & Green):
   □ 54-contact TQFN (10mm x 5.5mm, 0.5mm pitch) (PI3EQX8908)
   □ 72-contact TQFN (11mm x 5mm, 0.5mm pitch) (PI3EQX8984) - Backward Compatible to pinout of PI2EQX8864A

Eye Diagram

Before Channel Loss

Before ReDriver

After ReDriver

Host
TX +
−
RX +
−

Channel Loss
Long input trace, cable, or connectors
Long output trace, cable, or connectors

Pericom ReDriver
Equalizer, De-emphasis, Swing, and Amplifier Gain
+
−
+
−

Output trace
Input trace

Device
End Point
+ RX
−
+ TX
−