PI3EQX10908A
10Gbps 8-channel 10GE, ReDriver™with Linear Equalization

Description

Pericom Semiconductor's PI3EQX10908A is a 10 Gigabit Ethernet, 8 differential channels ReDriver™. The device provides programmable linear equalization, output swing and flat gain, by either pin strapping option or I2C Control, to optimize performance over a variety of physical mediums by reducing Inter-symbol interference.

PI3EQX10908A supports four 100-Ohm Differential CML data I/O's and 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 circuitry provides flexibility with signal integrity of the signal after the ReDriver.

Features

→ 1 to 11.3Gbps serial link with linear equalizer

→ Ideal for 10Gb and 40Gb Ethernet applications, 10Gb fiber channel, and 10G-KR suppport, up to 11.3Gbps data rates

→ Support 10GE protocol

→ Supporting 8 differential channels

→ Independent channel configuration of receiver equalization, output swing and flat gain

→ Per Channel Activity Detector with selectable input termination between 50Ω to V_{CC} and 200KΩ to V_{CC}

→ Per Channel Output Termination Detector on power up with selectable output termination between 50Ω to V_{CC} and High impedance

→ Fully compliant to KR link training

→ Very linear transfer funtion

→ Input Threshold detection

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

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

→ Supply Voltage: 3.3V±0.3V

→ Industrial Temperature Range: -40oC to 85oC

→ Packaging (Pb-free & Green):
  - 54-contact TQFN (10mm x 5.5mm x 0.5mm pitch)
  - flowthrough pinout

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
-