

PI3EQX10612

10Gbps, 2-Port, USB 3.1 Mux/Demux Redriver™

Features

- 10Gbps serial link with linear equalizer
- Full Compliancy to USB 3.1 Gen-2 and Gen-1 Super Speed Standard
- 1 to 2 DeMux from host Tx to device Rx
- 2 to 1 Mux from device Tx to host Rx
- Adjustable output linear swing, flat gain and equalization via I2C or Pin control
- 100ohm Differential CML I/O's
- Automatic Receiver Detect
- Auto "Slumber" mode for adaptive power management
- Supply Voltage 3.3V
- Temperature Range: -40oC to 70oC
- Totally Lead-Free & Fully RoHS Compliant (Notes 1 & 2)
- Halogen and Antimony Free. "Green" Device (Note 3)
- Packaging (Pb-free & Green):
 - 42-contact TQFN (9mm x3.5mm) (ZH)

Description

PI3EQX10612 is a low power, high performance 10Gbps 2-Port USB 3.1 Gen-2/Gen-1 Mux/DeMux Redriver

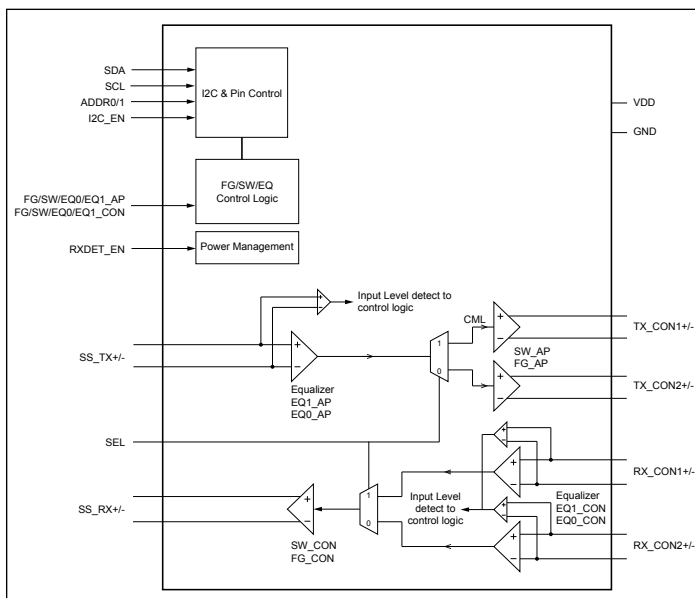
The 2 port Mux/Demux Redriver

The Redriver provides programmable equalization, swing and flat gain to optimize performance over a variety of physical mediums by reducing Inter-Symbol Interference. The Redriver supports two 100ohm Differential CML data I/O's between the Protocol ASIC to a switch fabric, over cable, 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. The channels' input signal level determines whether the output is active.

The Redriver also includes an adaptive power management feature to maximize battery life for power sensitive consumer devices.

Block Diagram



Applications

- Notebooks
- Mobile Phones
- Tablets
- Docking Station

Ordering Information

Part Number	Package	Description
PI3EQX10612ZLCEX	ZLC	40-Pin, 3x6mm (TQFN)

Notes:

1. No purposely added lead. Fully EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant.
2. See <https://www.diodes.com/quality/lead-free/> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
4. E = Pb-free and Green
5. X suffix = Tape/Reel