

PI3EQX1064

2-Port USB 3.2 Gen 2 10Gbps ReDriver

Description

The DIODES PI3EQX1064 is a low-power, high-performance, USB 3.2 Gen 2 linear ReDriver™ designed specifically for the USB 3.2 protocol.

The device provides programmable equalization and flat gain to optimize performance over a variety of physical mediums by reducing intersymbol interference. The PI3EQX1064 supports two 100Ω differential CML data I/Os 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.

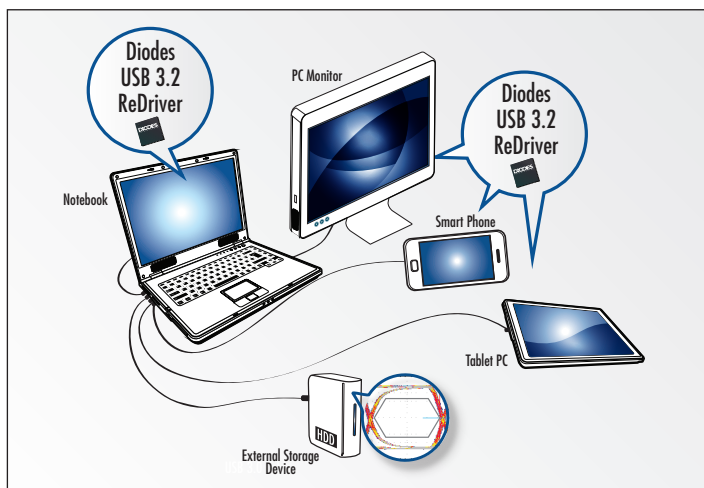
The integrated equalization circuitry provides flexibility with signal integrity of the signal before the ReDriver. Each channel operates fully independently. The channels' input signal level determines whether the output is active.

The PI3EQX1064 also includes an automatic receiver detect function. The receiver detection loop is active again if the corresponding channel's signal detector is idle for longer than 7.3ms. The channel then moves to unplug mode if load is not detected, or it returns to low-power mode (slumber mode) due to inactivity.

Features

- Low-Noise, Non-Inverting Buffer with 1 Output
- 5Gbps & 10Gbps Serial Link with Linear Equalizer
- USB 3.2 Gen 2 and Gen 1 Compatible
- Four 10Gbps Differential Signal Pairs
- Pin Adjustable Receiver Equalization
- Pin Adjustable Flat Gain
- 100Ω Differential CML I/Os
- Automatic Receiver Detect
- Auto Slumber Mode for Adaptive Power Management
- Single Supply Voltage: 3.3V
- Patented Technology
- Totally Lead-Free & Fully RoHS Compliant (Notes 1 & 2)
- Halogen and Antimony Free. "Green" Device (Note 3)
- For automotive applications requiring specific change control (i.e. parts qualified to AEC-Q100/101/104/200, PPAP capable, and manufactured in IATF 16949 certified facilities), please [contact us](mailto:contact_us@diodes.com) or your local Diodes representative. <https://www.diodes.com/quality/product-definitions/>
- Packaging (Pb-free & Green available):
 - 32-pin, 2.1mm × 4.3mm, UQFN (ZTFA)

Application Diagram



Ordering Information

Part Number	Package Code	Description
PI3EQX1064ZTFAEX	ZTFA	32-Pin, U-QFN2143-32

Notes:

- E = Pb-free and Green
- X suffix = Tape/Reel

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.

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