

# PI3EQX32908E

## 32Gbps, 8-Channel PCIe 5.0 Linear ReDriver with I2C Master Mode for External EEPROM

### Description

The DIODES PI3EQX32908E is a multi-data rate, 8-differential channel ReDriver™. The device provides programmable linear equalization, output swing and flat gain, through I2C control interface, and is optimized for performance over a variety of physical media with reduced Inter-Symbol Interference.

The PI3EQX32908E supports eight 100Ω differential CML data I/O's and extends signals across data pathways on the user's platform.

The integrated equalization circuitry provides flexibility with signal integrity of the signal before the ReDriver, while the integrated linear amplifier/buffer circuitry provides flexibility with signal integrity of the signal after the ReDriver.

The PI3EQX32908E can support I2C master mode for external EEPROM, it can support up to sixteen masters connected in daisy chain.

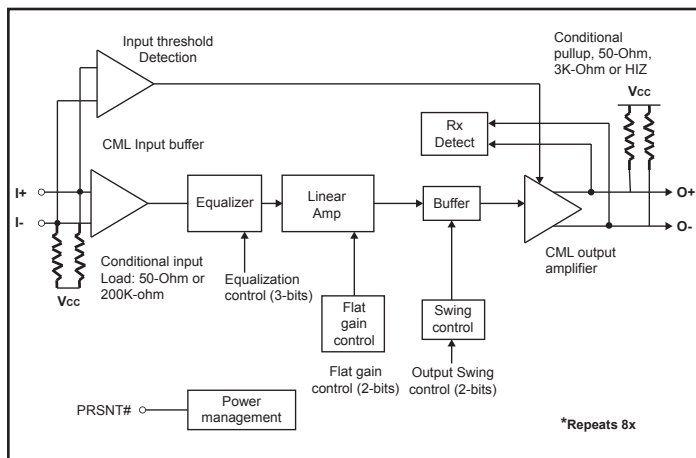
### Features

- 2.5 to 32 Gbps Serial Link with Linear Equalizer
- Supports PCIe® 5.0, SAS4/ UPI and CXL Protocols
- Supports 8 Differential Channels
- Independent Channel Configuration of Receiver Equalization, Output Swing and Flat Gain
- Transparent to Link Training, Idle, and OOB
- Support Pin Strap and I2C Slave/Master Mode
- Support I2C Master Mode for External EEPROM
- 3-Bit 4-Level Selectable Address Bit for I<sup>2</sup>C
- Supply Voltage: 3.3V±0.3V
- Industrial Temperature Range: -40°C to 85°C
- 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](#) or your local Diodes representative. <https://www.diodes.com/quality/product-definitions/>
- Packaging (Pb-free & Green available):
  - 62-contact, W-QFN3590-62 (ZR)

### Application(s)

- Networking
- Enterprise
- Server
- Storage

### Block Diagram



### Ordering Information

Part Number	Package	Description
PI3EQX32908EZRIEX	ZR	62-Contact (W-QFN3590-62)

#### Notes:

- I = Industrial
- 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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