

PI3DPX1203C

3.3V 10Gbps DisplayPort 2.1/1.4 Linear ReDriver

Description

The DIODES PI3DPX1203 is a DisplayPort 2.1/ DP1.4 linear ReDriver with four channels operated by 3.3V power supply. The device supports UHBR10 (10Gbps), HBR3 (8.1Gbps), HBR2 (5.4Gbps), and RBR under various DisplayPort speeds. Displayport source-side and sink-side devices communicate through the AUX transaction between the source and the sink-side devices.

Input Equalization, Voltage Swing and Flat Gain control can be configured with pin-strapping or I2C programming to optimize Main Link high speed signals over a variety of physical medium by reducing inter-symbol interference. Diodes' Linear ReDriver technology can deliver 2 times better additive jitters performance than traditional ReDrivers.

Linear equalization always provides very flexible component placement, cascade connection and easy adjustment after the Redriver location changes during the product development events.

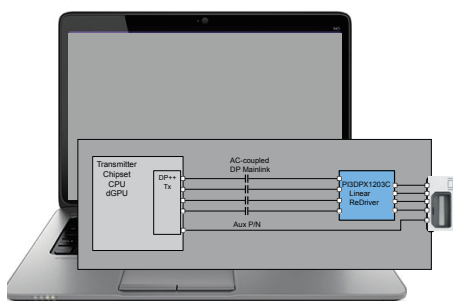


Figure 1-1 DP1.4 HBR3 Redriver in the NB PC

Application(s)

- Notebooks, Desktops
- Display Monitors
- Active Adaptors, Dongles, Docking

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.

Features

- Compliant with VESA DisplayPort 2.1 Specification up to 10Gbps Link Rate
- Latency-free for the variable video frame rate support
- Dual mode DisplayPort support
- Linear ReDriver allows flexible placement with DP Main Link boost setting
- Ideal for DP Alt Type-C® Source and Sink-side application with PD Controllers with Aux Link Training Transparent Mode support
- Linear Equalizer increases Link Margin with Sink-side DFE (Decision Feedback Equalizer)
- Independent Main Link channel configuration for 4-bit Equalization, 2-bit Voltage Output swing and 2-bit Flat Gain control
- Pin strap or I2C programmable for device configuration setting
- Intra- and Inter-Channel Polarity Swap support
- I2C Address selectable for configuration register access
- Low Stand-by Power Consumption
- Power Supply Voltage: 3.3V
- 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@diodes.com) or your local Diodes representative.

<https://www.diodes.com/quality/product-definitions/>

Ordering Information

Orderable Part Number	Package Code	Package Description
PI3DPX1203CZLEX	ZL	32-pin, Very Thin Quad Flat No-Lead (TQFN) (3X6mm)
PI3DPX1203CZHEX	ZH	42-pin, Very Thin Quad Flat No-Lead (TQFN) (3.5x9mm)
PI3DPX1203CZHIE	ZH	Industrial Temperature, 42-pin, Very Thin Quad Flat No-Lead (TQFN) (3.5x9mm)

Notes:

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

Mouser Electronics

Authorized Distributor

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