A product Line of
Diodes Incorporated

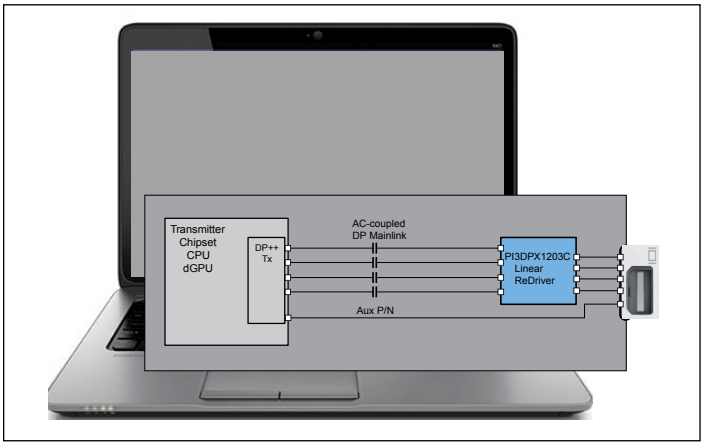
PRODUCT BRIEF

PI3DPX1203C

DisplayPort 1.4 HBR3 Linear Redriver with Latency-Free, DP Transparent Link Training support

Features

- Compliant with VESA DisplayPort 1.4 specification up to 8.1 Gbps 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-Q100/101/200, 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):
  - 32-contact, 3x6mm TQFN (ZL)
  - 42 -contact, 3.5x9mm TQFN (ZH)



DP1.4 HBR3 Redriver in the NB PC

Description

PI3DPX1203C is a 4 channel, DisplayPort 1.4 compliant, 8.1 Gbps HBR3 Linear Redriver with Link Training transparency support. 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 programing 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.

Applications

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

Ordering Information

Part Number	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)
PI3DPX1203CZHIEX	ZH	Industrial Temperature, 42-pin, Very Thin Quad Flat No-Lead (TQFN) (3.5x9mm)

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