

PI3HDX1204C

4 Channel HDMI2.0 Linear Redriver with Low Equalizer Option

Features

- Supports 6Gbps HDMI2.0 signals with non-blocking linear redriver via I²C or pin control settings
- Supports Dual-Mode DP HBR3 to HDMI2.0 level shifting
- Supports 4 differential channels
- Supports 7dB gain compensation @3GHz
- Independent channel configuration of receiver equalization, output swing and flat gain in I²C control mode
- Transparent to link training, rate and coding
- 220mW per channel power dissipation with 1200mVpp output swing
- Supports back current leakage free (I_{off}) on I²C and HDMI output pins
- Supports I²C slave mode setting and I²C master mode for external EEPROM setting
- Pin strap value latched into I²C register
- 3-bit selectable address bit for I²C
- 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-Q100/101/200, PPAP capable, and manufactured in IATF 16949 certified facilities), please [contact us](#) or your local Diodes representative.
<https://www.diodes.com/quality/product-definitions/>

Description

Diodes' PI3HDX1204C is a multi-data rate, 4 differential channels ReDriver™. The device provides programmable linear equalization, output swing and flat gain, by either pin strapping option or I²C Control, to optimize performance over a variety of physical mediums by reducing Inter-symbol interference. PI3HDX1204C supports four 100Ω Differential CML data I/O's and extends the signals across other distant data pathways on the user's platform.

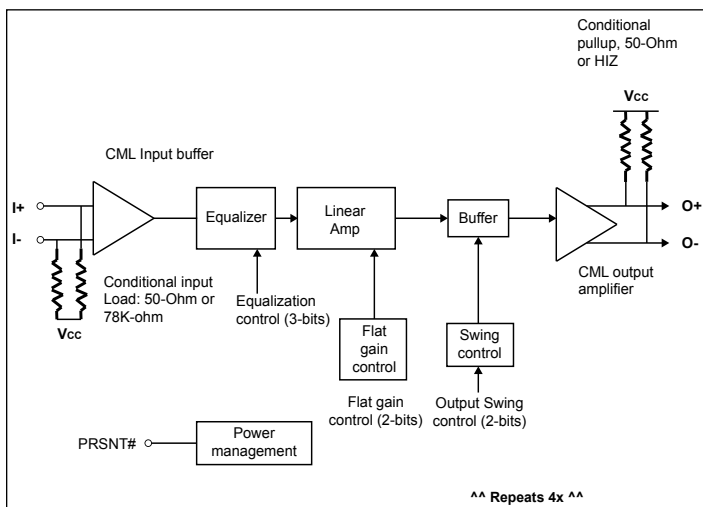
The integrated equalization circuitry provides flexibility with signal integrity of the signal before the ReDriver, whereas the integrated linear amplifier/buffer circuitry provides flexibility with signal integrity of the signal after the ReDriver. The chip provides low equalizer options for short prechannel.

The device can support dual mode DisplayPort level shift application for HDMI2.0 compliant output signals.

Applications

- Laptop and Desktop PC
- Gaming Console
- DTV and Set-top-Box
- Docking Station and Peripherals

Block Diagram



Ordering Information

Part Number	Package Code	Description
PI3HDX1204CZH	ZH	42-Contact, Thin Fine Pitch Quad Flat No-Lead (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