

USB Type-C Linear ReDriver with Built-in AUX and SBU Switch for USB 3.2 and DP 1.4

The PI3DPX1207C is a linear ReDriver supporting USB Type-C® port operation for 10Gbps USB 3.2, and 8.1Gbps DisplayPort 1.4 standards in a commercial temperature range.

The PI3DPX1207C is in a 4:4 channel configuration, supporting the CPUs with an integrated USB/DP crossbar switch. The ReDriver is transparent to channel-link training and performs ultra-low signal latency to achieve sound signal integrity and system compatibility.

The device has programmable CLTE equalization, flat gain, and output swing linearity controls. These features compensate the channel loss and remove ISI jitter for longer channel reach.

The PI3DPX1207C is an enhanced version of the PI3DPX1207B.

USB Type-C is a registered trademark of USB Implementers Forum.



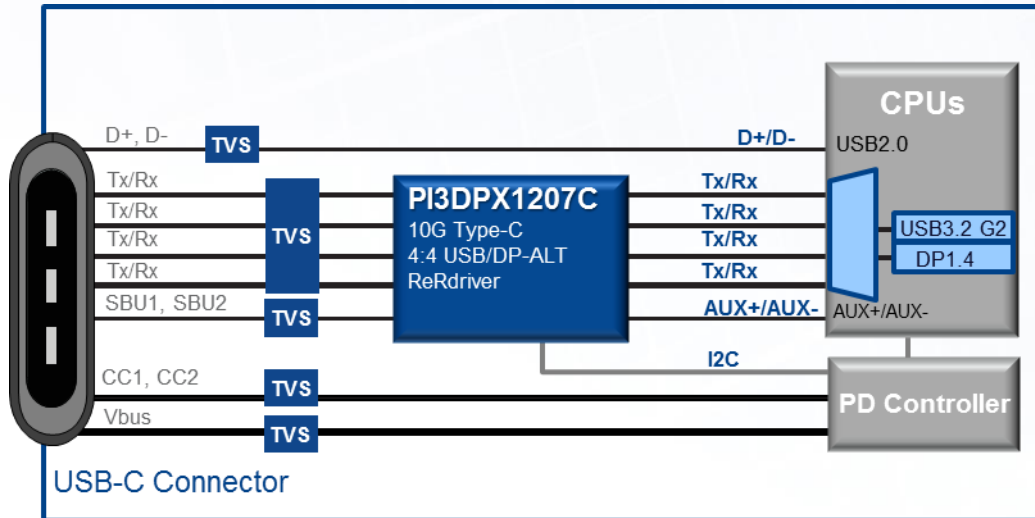
The Diodes Advantage

- Flexible Type-C USB 3.2/DP-Alt Mode Operations**
 USB 3.2 Gen2x2, USB 3.2 Gen2/2-lane DP1.4, and 4-lane DP1.4 modes
- High-Speed Signal Integrity Settings**
 Receiver side CLTE, output-side flat gain, and swing linearity settings
- Programmable and Flexible Controls**
 I²C or pin-strapping control
- Auto Power Saving Modes for Both USB and Display Port**
 USB U2/U3 power saving modes
- Transparent and Ultra-Low Latency Linear ReDriver Channels**
 Performs sound signal integrity and compatibility for system designs

Applications

- Laptop, Desktop, and AIO PCs
- Docking Stations
- Tablets and Mobile Devices
- PC Peripherals
- Virtual Reality Devices
- Active Cables

Typical Application Circuit



Product Portfolio

Part Number	Operation Voltage	Channels	Data Rate (Gbps)	Lanes/Ports	Output Swing Max (mV)	Programming Interface(s)	Operation Temperature	Packages
PI3DPX1207C	3.3V	4	10	4	1200	I ² C or Pin-Strapping	0 ~ +70°C	40-pin TQFN

Ordering Information

Ordering Number	Package Code	Package Description
PI3DPX1207CZHEX	ZH	42-pin Very Thin Quad Flat No-Lead (TQFN) (3.5mm x 9 mm)

Further Information

<https://www.diodes.com/part/PI3DPX1207C>