

### 10Gbps USB Type-C USB3.1 Gen2/DP1.4 Linear ReDriver with Built-in DP Aux Listener and Mux

PI3DPX1205A and PI3DPX1207B are the latest linear ReDriver products from Diodes supporting USB Type-C™ port operation for 10Gbps USB3.1 Gen2, and 8.1Gbps Displayport 1.4 standards.

PI3DPX1205A is 6:4 channel configuration and PI3DPX1207B is 4:4 channel configuration, covering all CPU or application processor designs.

Both provide programmable CLTE equalization, Flat Gain and Swing controls for channel loss compensation to remove ISI jitter and extend channel reach.

The design is transparent to channel link training and performs ultra-low signal latency to achieve good signal integrity performance and system compatibility.

The built-in AUX Listener can monitor the DisplayPort traffic for automatic channel configuration and power saving.

PI3DPX1205A also supports Intel DCI test signals via Type-C connector.



#### The Diodes' Advantage

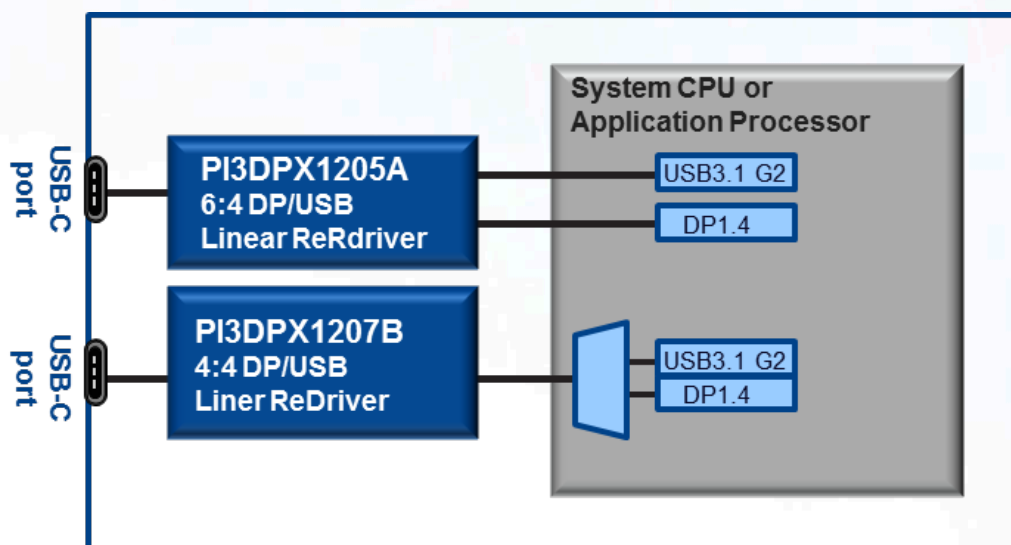
- **Flexible DP 1.4/USB 3.1 Gen 2 Type-C Switching for DPAIt Output**  
Supports USB3.1 Gen2, USB3.1 Gen2/2-lane DP1.4 and 4-lane DP1.4 modes
- **High Speed Signal Integrity Settings**  
Supports receiver side CLTE and output side Flat Gain and Swing settings
- **Programmable and Flexible Controls**  
I2C control for both devices. Pin-strapping option for PI3DPX1207B
- **Auto Power Saving Modes for both USB and DP**  
USB U2/U3 power saving modes and DP D3 mode with built-in AUX Listener
- **Transparent and Ultra Low Latency Linear ReDriver Channels**  
Performs good signal integrity and compatibility for system design

#### Applications

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

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

### Typical Application Circuit



### Product Portfolio

Part No	Operation Voltage	Channels	Data Rate (Gbps)	Lanes/Ports	Output Swing Max(mV)	Programming Interface(s)	Operation Temperature	Packages
PI3DPX1205A	3.3V	6	10	4	1200	I2C	0 ~ +70°C	40-pin TQFN
PI3DPX1207B	3.3V	4	10	4	1200	I2C and Pin-Strapping	0 ~ +70°C	42-pin TQFN

### Ordering Information

Ordering Number	Package Code	Package Description
PI3DPX1205A1ZLBEX	ZLB	40-pin, Very Thin Quad Flat No-Lead (TQFN) (4.x6x0.75mm)
PI3DPX1207BZH6EX	ZH	42-pin, Very Thin Quad Flat No-Lead (TQFN) (3.5x9.0x0.75mm)

### Further Information

<https://www.diodes.com/part/PI3DPX1205A>

<https://www.diodes.com/part/PI3DPX1207B>