



Automotive-compliant 10Gbps USB Type-C, USB3.2/DP1.4 Linear ReDriver with Built-in DP Aux Listener and Mux

The PI3DPX1207Q is an automotive AECQ-100 Grade 3 linear ReDriver™ that supports USB Type-C® operation for 10Gbps USB3.2 and 8.1Gbps DisplayPort™ 1.4 standards.

The device has a 4:4 channel configuration which supports CPUs with an integrated USB/DP crossbar switch. The ReDriver is transparent to channel link training and performs ultra-low signal latency to achieve good signal integrity and system compatibility.

It has programmable CTLE equalization, flat gain and output swing linearity controls which compensate for channel loss and remove ISI jitter for longer channel reach. With its built-in AUX Listener, the device monitors the DisplayPort™ traffic for automatic channel configuration and power saving.

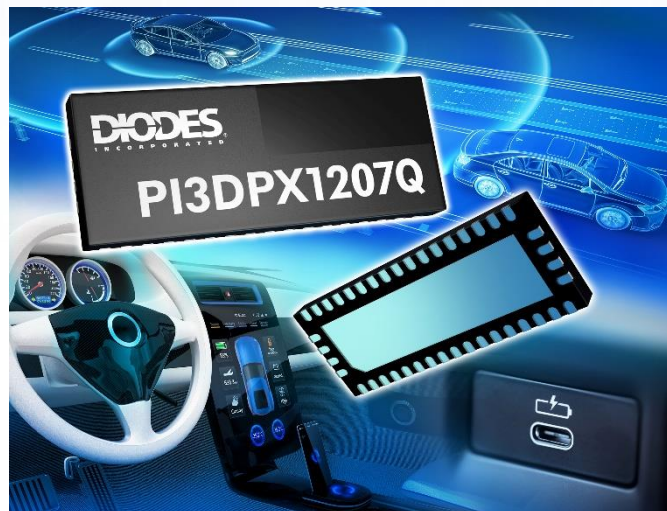
The PI3DPX1207Q has been qualified to AEC-Q100 Grade 3 and is designed in Qualcomm® Snapdragon™ Automotive Development Platform (ADP) for infotainment applications

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ReDriver™ is a trademark of Diodes Incorporated.

DisplayPort™ and the DisplayPort™ logo are trademarks owned by the Video Electronics Standards Association (VESA®) in the United States and other countries.

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The Diodes Advantage

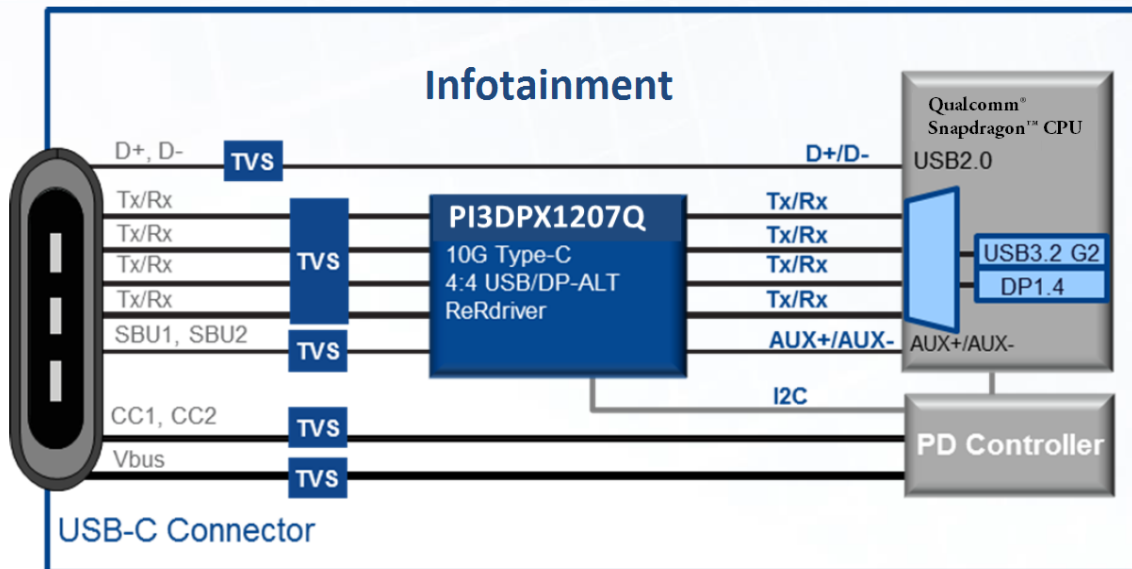
- **Supports USB3.2 Gen2x2, USB3.2 Gen2 /2-lane DP1.4 and 4-lane DP1.4 modes**
Flexible USB Type-C, USB 3.2/DP-Alt mode operations
- **Programmable Receiver side CTLE, output side Flat Gain and Swing Linearity settings**
This is the first automotive grade 10Gbps USB-C DP-Alt linear ReDriver released to the market that provides good signal integrity performance and design reliability
- **Programmable and flexible controls**
I2C or Pin-strapping control
- **Auto power saving modes for both USB and DP**
USB U2/U3 and DP D3 power saving modes with built-in AUX Listener
- **Automotive AECQ-100 Grade 3 qualified**
Designed in Qualcomm® Snapdragon™ Automotive Development Platform (ADP) for Infotainment applications

Applications

- Automotive infotainment
- Embedded
- Industrial



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
PI3DPX1207Q	3.3V	4	10	4	1200	I2C or Pin-Strapping	-40°C ~ +85°C	42-pin TQFN

Ordering Information

Ordering Number	Package Code	Package	Reel Size	Part Count
PI3DPX1207Q3ZHEX	ZH	42-pin (TQFN) (3.5mm x 9mm x 0.75mm)	7"	3000

Further Information

<https://www.diodes.com/part/PI3DPX1207Q>