New Product Announcement

PI2DPX1217
PI2DPX1066
PI2DPX1263

1.8V 10Gbps USB-C/DP 2.0 (UHBR10) Linear ReDrivers Featuring Enhanced Signal Integrity Performance and Low-Power Operation for Mobile and PC Applications

The PI2DPX1217 and PI2DPX1066 are 1.8V linear ReDriver™ products supporting USB-C® port operation for 10Gbps USB 3.2, and 10Gbps DisplayPort™ 2.0 (UHBR10) standards for smartphones, tablets, notebooks, docking stations, active cables, and other portable applications.

The PI2DPX1263 is a 1.8V four-channel DisplayPort linear ReDriver with maximum data rates up to 10Gbps. The device supports various DisplayPort transmission modes.

The PI2DPX1217 and PI2DPX1066 come in 4:4 channel configuration, supporting CPUs with integrated USB/DP crossbar switches. The default output power-up mode is a USB bypass for the PI2DPX1217 and a high impedance state for the PI2DPX1066.

These ReDrivers are transparent to channel link training and have ultra-low signal latency, enabling good signal integrity and system compatibility. They have I2C programmable CTLE equalization, flat gain, and output swing linearity controls. These compensate for channel loss and remove ISI jitter for a longer channel reach.

With built-in AUX listeners, the devices monitor the DisplayPort traffic for automatic channel configuration and power saving.

The Diodes Advantage

- **PI2DPX1217 and PI2DPX1066 provide flexible USB-C DP-Alt mode operation at up to 10Gbps**
  USB 3.2 Gen2x2, USB 3.2 Gen2/2-lane DP 2.0 (UHBR10) and four-channel DP 2.0 (UHBR10) modes for PI2DPX1217 & PI2DPX1066
- **PI2DPX1263 supports all VESA DisplayPort transmission modes**
  RBR (1.62Gbps), HBR (2.7Gbps), HBR2 (5.4Gbps), HBR3 (8.1Gbps), and UHBR10 (10Gbps)
- **High-speed signal integrity I2C programmable settings**
  Receive equalizer, transmit flat gain settings
- **Very thin and small X2-QFN2845-32 package**
  2.85 x 4.5 x 0.35mm, 0.4mm pitch
- **Automatic power-saving modes for both USB and DP**
  USB U2/U3 and DP D3 power-saving modes with built-in AUX listener
- **Transparent and ultra-low latency linear ReDriver channels**
  Performs good signal integrity and compatibility for system design

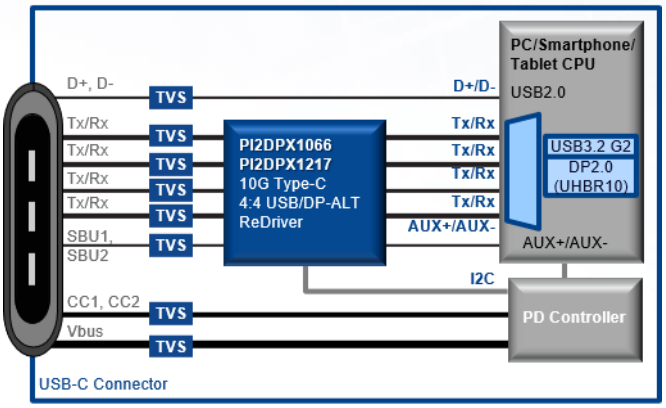
Applications

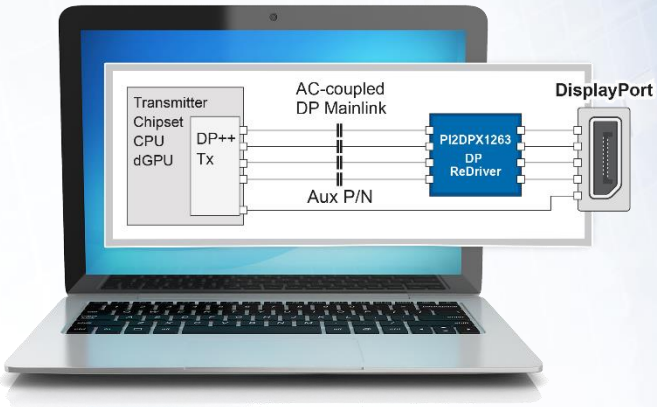
- Smartphones
- Tablets
- Active cables
- Gaming consoles
- Notebooks
- Docking stations
- Monitors
- Virtual reality equipment

New Product Announcement

PI2DPX1217
PI2DPX1066
PI2DPX1263

Typical Application Circuit





1.8V 10Gbps Linear ReDriver Product Portfolio

Part Number	Description	Operating Voltage (V)	Channels	Default Power-On Mode	Data Rate (Gbps)	Lanes/ Ports	Maximum Output Swing (mV)	Programming Interface(s)	Operating Temperature °C	Packages
PI2DPX1217	USB-C DP-Alt ReDriver with AUX-SBU switch	1.8V	4	USB 3.2 bypass	10	4	900	I2C	-40 ~ +85	X2-QFN-32
PI2DPX1066	USB-C DP-Alt ReDriver with AUX-SBU switch	1.8V	4	USB-C Safe State	10	4	900	I2C	-40 ~ +85	X2-QFN-32
PI2DPX1263	DisplayPort 2.0 (UHBR10) with AUX Listener & D3 power saving	1.8V	4	-	10	4	1370	I2C	-40 ~ +85	X2-QFN-32

Ordering Information

Ordering Number	Package Code	Package	Moisture Sensitivity	Reel Size	Tape Width	Quantity
PI2DPX1217XUAEX	XUA	X2-QFN2845-32 (2.85 x 4.5 x 0.35mm)	MSL 1	13”	12mm	3500
PI2DPX1066XUAEX						
PI2DPX1263XUAEX						