



New Product Announcement

PI3DPX20021 PI3DPX20012

Tunable Linear ReDriver Muxes and Demuxes Support Superior Levels of Signal Integrity for High-Speed DisplayPort 2.0

The DIODES™ PI3DPX20021 and DIODES™ PI3DPX20012 are 2-to-1, four-lane, ReDriver™ muxes; and 1-to-2, four-lane, DisplayPort™ 2.0, Redriver demuxes, respectively; operating at up to UHBR20 20Gbps speeds.

The PI3DPX20021 and PI3DPX20012 have adjustable equalizer settings through either pin strap or I2C. There are eight equalizer settings in total, and both devices have four levels of adjustment for output flat gain and output swing. These adjustments compensate for channel loss and remove ISI jitter for longer channel reach.

The devices are used in graphic processing unit (GPU) outputs or other display source multiplexing/demultiplexing applications such as mobile workstations, gaming notebooks, all-in-one PCs, docking devices, display dongles, and other embedded applications.

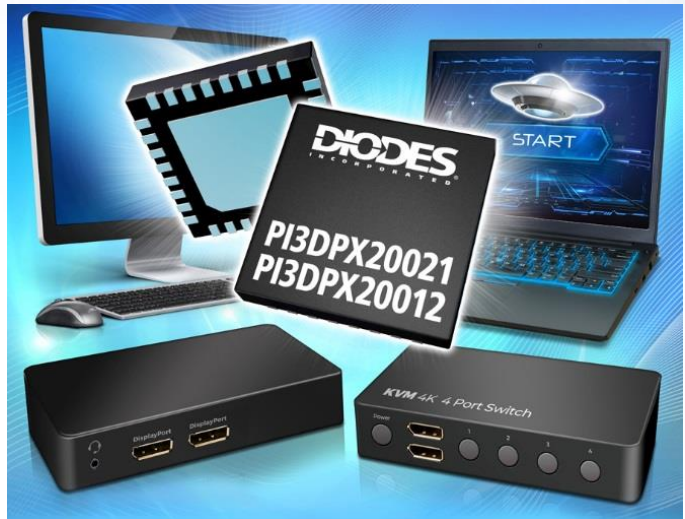
The PI3DPX20021 and PI3DPX20012 are packaged in the 32-pin, 3mm x 6mm, TQFN package and operate with an industrial temperature range of -40°C ~ +85°C.

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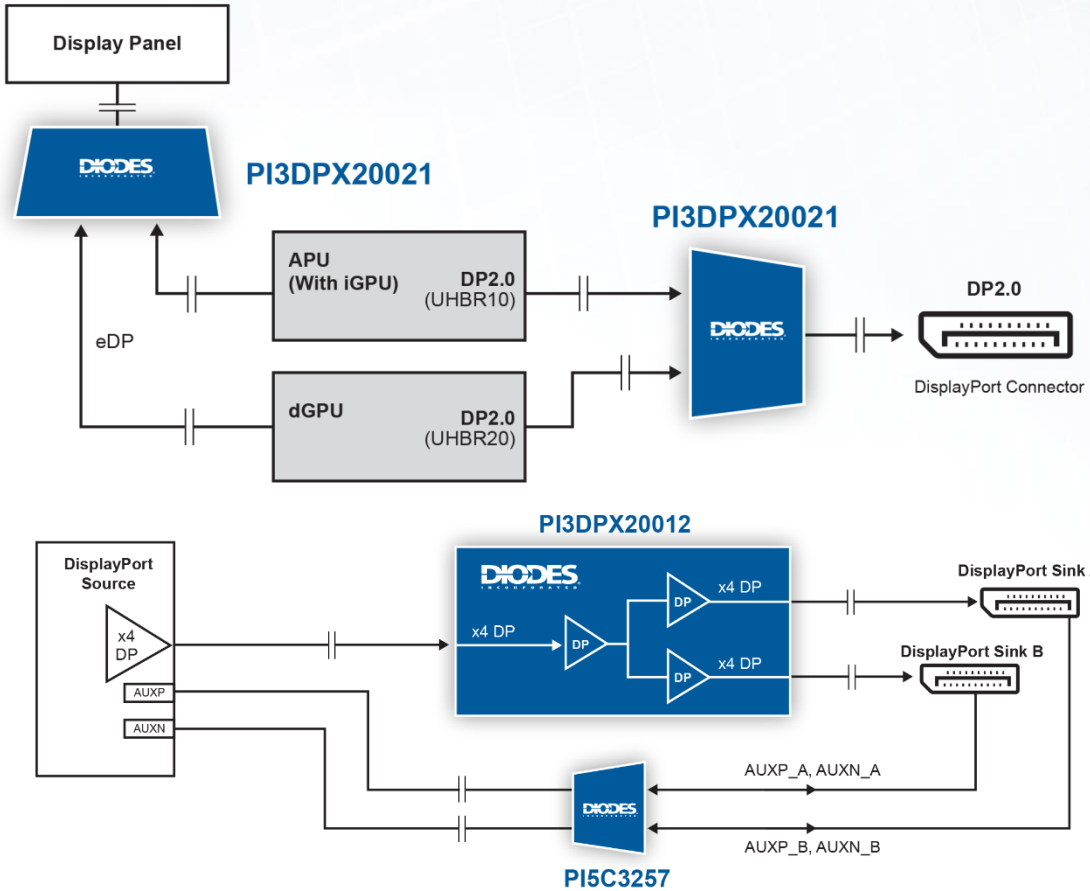
The DIODES™ Advantage

- PI3DPX20021 and PI3DPX20012 support all VESA® DisplayPort transmission modes**
 RBR (1.62Gbps), HBR (2.7Gbps), HBR2 (5.4Gbps), HBR3 (8.1Gbps), UHBR10 (10Gbps), UHBR13.5 (13.5Gbps), and UHBR20 (20Gbps)
- High-speed signal integrity pin strap/I2C with programmable settings**
 Facilitates fine-tuning of equalizer, output flat gain, and output swing
- Transparent and ultra-low latency for linear ReDriver channels**
 Maintains end-to-end link training of signal integrity, ensuring high signal fidelity.
- Input signal detection**
 Enables automatic power-saving mode

Applications

- Gaming notebooks
- Mobile workstations
- All-in-one PCs
- Embedded systems
- Display dongles
- Industrial computing systems

Typical Applications



Product Portfolio

Part Number	Description	Operating Voltage (V)	Channels	Data Rate (Gbps)	Lanes/ Ports	Maximum Output Swing (mV)	Programming Interfaces	Operating Temperature °C	Package
PI3DPX20021	DP2.0 (UHBR20) 2:1 4 Lane Active Mux	3.3V	4	20	4	1200	Pin Strap or I2C	-40 ~ +85	TQFN-40
PI3DPX20012	HDMI™ 2.1 1:2 4 Lane Active Demux	3.3V	4	20	4	1200	Pin Strap or I2C	-40 ~ +85	TQFN-40

Ordering Information

Orderable Part Number	Package Code	Package	Moisture Sensitivity	Reel Size	Tape Width	Quantity
PI3DPX20021ZLDEX	ZLD	TQFN-40 (3x6x0.8mm)	MSL 1	13"	12mm	3500
PI3DPX20012ZLDEX						