



Analog and Discrete
Power Solutions

10Gbps Automotive-Compliant Active Crossbar Mux from Diodes Incorporated Simplifies Smart-Cockpit Connectivity

Plano, Texas – August 20, 2024 – Diodes Incorporated (Diodes) (Nasdaq: DIOD) today introduces its automotive-compliant* 10Gbps 6:4 active crossbar multiplexer (mux) with a linear ReDriver™. The compact [PI3DPX1225Q](#) switches USB 3.2 and DisplayPort™ 2.1 signals through a USB Type-C® connector, and delivers low-latency connectivity with high signal integrity for smart cockpits and rear-seat entertainment systems.

The PI3DPX1225Q supports three operating modes: the device can connect one lane of USB 3.2 Gen 2 to the USB Type-C connector; one lane of USB 3.2 Gen 2 and two channels of DP 2.1 UHBR10; or four channels of DP 2.1 UHBR10. The device also integrates an AUX listener and, in compliance with the USB Type-C standard, swaps the AUX channels when a flipped cable is detected.

For each of the USB 3.2 Gen 2 and DP 2.1 UHBR10 operating modes, the differential signals can be easily adjusted with continuous time linear equalization (CTLE). Output compression swing (-1dB) and flat-gain values are controlled by the I2C setting. By reducing intersymbol interference (ISI) jitter, the 10Gbps signal performance is optimized over a variety of physical mediums. Linear equalization does not block the decision feedback equalizer (DFE) receiver's adaptive channel controls—this supports DP 2.1 transparent link training (LT) without dependency on the DP-AUX channels listener.

The PI3DPX1225Q is packaged in a 40-Pin W-QFN6040-40 with a compact 4mm x 6mm footprint. The [PI3DPX1225Q](#) is available from \$1.87 in 3,500-piece quantities.

About Diodes Incorporated

Diodes Incorporated (Nasdaq: DIOD), a Standard and Poor's SmallCap 600 and Russell 3000 Index company, delivers high-quality semiconductor products to the world's leading companies in the automotive, industrial, computing, consumer electronics, and communications markets. We leverage our expanded product portfolio of analog and discrete power solutions combined with leading-edge packaging technology to meet customers' needs. Our broad range of application-specific products and solutions-focused sales, coupled with global operations including engineering, testing, manufacturing, and customer service, enable us to be a premier provider for high-volume, high-growth markets. For more information, visit www.diodes.com.

The Diodes logo is a registered trademark of Diodes Incorporated in the United States and other countries.

** Automotive-compliant—qualified to AEC-Q100 Grade 3, manufactured in facilities certified to IATF 16949, and supports PPAP documents.*

ReDriver™ is a trademark of Diodes Incorporated.

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