



20Gbps Multi-Channel Mux/Demux from Diodes Incorporated Facilitates Better HD/UHD Video Signal Routing

Plano, Texas – May 5, 2021 – Diodes Incorporated (Nasdaq: DIOD) has further expanded its video passive multiplexer/demultiplexer (mux/demux) switch portfolio with the introduction of the 4-channel [PI3WVR14412](#). Supporting up to 20Gbps operation, this 2:1/1:2 mux/demux device provides speeds beyond those of other products on the market - resulting in a 35% increase over what is offered by competitors.

The PI3WVR14412 is fully compliant with both the DisplayPort™ 2.0 and HDMI2.1 interface standards, which are featured in the latest generation of graphics processor units (GPUs). Key applications are mobile workstations, games consoles, docking systems, notebook computers, monitors, TVs, and set-top boxes.

The PI3WVR14412 enables the routing of 4K high definition (HD) and 8K ultra-high definition (UHD) video signals while exhibiting extremely low signal attenuation. This routing can either be from two sources to a single sink or conversely a single source to dual sinks.

Use of proprietary technology is responsible for the elevated speeds attained by the [PI3WVR14412](#). The high-speed channels of this device are also able to maintain industry-leading signal integrity characteristics. When running at 10GHz, a -2dB insertion loss and a -10dB return loss are typically witnessed. The channel-to-channel crosstalk is just -35dB and off isolation is -15dB at this frequency. Bit-to-bit skew is normally only 5ps.

Bidirectional communication is provided via the AUX channel. This means that other protocols like USB 2.0 can be supported, thereby avoiding the need for additional cabling to the host and reducing overall system costs. The wide input signal voltage range covered (0V to 3.6V) allows direct coupling of HDMI at VDD bias and DP signals at 0 bias. Fewer passive components are required, so less board real estate is needed. Hot plug detection (HPD) and display data channel (DDC) are also included, which eliminates the need for an external mux. An extended temperature range of 0°C to 105°C is supported.

These mux/demux devices are supplied in compact 40-pin TQFN packages (with 3mm x 6mm x 0.75mm dimensions), and they have a unit price of \$1.70 in 5000 piece quantities.

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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 consumer electronics, computing, communications, industrial, and automotive markets. We leverage our expanded product portfolio of discrete, analog, and mixed-signal products and leading-edge packaging technology to meet customers' needs. Our broad range of application-specific solutions and solutions-focused sales, coupled with worldwide operations of 31 sites, including engineering, testing, manufacturing, and customer service, enables us to be a premier provider for high-volume, high-growth markets. For more information visit www.Diodes.com.

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