



Product news

Industry-First 2.5/5/10Gbps Ethernet LAN Mux/Demux from Diodes Incorporated Enables Port Switching in Next-Generation Corporate LANs

Plano, Texas – March 11, 2020 Diodes Incorporated (Nasdaq: DIOD) today introduced the PI3L2500 LAN multiplexer/demultiplexer, the industry's first switch designed to enable port switching in next-generation corporate LANs at Ethernet signal speeds of 2.5/5/10 Gigabit per second (Gbps).

The [PI3L2500](#) bidirectional mux/demux design enables two Ethernet PHY differential outputs to operate with a single RJ45 connector or enables one Ethernet PHY output to be routed to one of two RJ45 connectors. This functionality provides the greater redundancy, flexibility, and performance needed by device manufacturers looking to introduce new equipment capable of operating at today's LAN speeds while providing a migration path to higher speeds. Before the introduction of the PI3L2500, LAN switches were only able to operate up to 1Gbps.

The PI3L2500 can demultiplex one input port with eight channels to one of two output ports or multiplex two input ports to one output port. The ports are selected using a single SEL input and a power down (PD) input that allows the device to enter a standby mode to save power. Low power is as important as high performance, and the PI3L2500 excels in active mode with a maximum active current of just 1.5mA (1.0mA typical) and a standby current of 0.3mA (typical). Three multiplexed channels are also provided for switching status LEDs.

Designed to provide a future-proof solution to high-speed signal routing, the PI3L2500 features a wide 2GHz signal bandwidth to carry data switching up to 10Gbps. The device achieves this performance using a 0.18 μ m process that delivers extremely low on-resistance of 4 Ω and low on/off capacitance of just 1.5pF (on) and 3.0pF (off). To preserve signal fidelity, crosstalk and isolation are also very low at -35dB. High-speed operation also depends on low propagation, and the PI3L2500 delivers this with a typical propagation delay of just 0.25ns.

"Diodes has been pioneering signal switches for over two decades, by being the first in market to address emerging technologies," said Kay Annamalai, Senior Marketing Director, Diodes Incorporated. "The PI3L2500 2.5GE-10GE LAN switch will aid the migration within corporate networks from 1GE to 2.5GE Ethernet and beyond, for applications such as notebooks and docks, as well as in packet transport networks where upgradability and redundancy are needed."

The PI3L2500ZHEX is now available in the 42-pin TQFN package.

Further information is available at www.diodes.com.

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 25 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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