



# New Product Announcement

## PI2DBS16212A

### 1.8V, 20Gbps, 2-Channel 2:1 Mux/Demux Delivers Low-Loss High-Speed Signal Switching

The PI2DBS16212A is a high-performance, high-speed, 2-channel differential, analog passive mux/demux switch.

The device can switch multiple serial protocols up to data rates of 20Gbps, including PCIe 4.0, USB 3.2 Gen2, 10GE, Thunderbolt™ 3, SAS 3.0, and SATA 3.0 signals.

The PI2DBS16212A's bidirectional operation enables it to operate as both a differential signal path multiplexer and as a demultiplexer at data rates up to 20 Gbps, offering low 30ps channel-to-channel skew.

Based on a unique design technique, Diodes has been able to optimize dynamic electrical characteristics of the device, such as low insertion loss, crosstalk, and return loss.

Packaged in the tiny 2.5mm x 2.5mm W-QFN2525-24 for space-constrained applications.



#### The Diodes Advantage

##### High-Performance Signal Multiplexing even at 1.8V for Reduced Power Consumption

- **2-channel differential, bidirectional 2-to-1 mux**  
Offers flexibility in terms of number of channels and routing
- **Fast 14GHz -3dB bandwidth**  
Enables data rates of up to 20Gbps
- **Lowered Supply voltage: 1.8V**  
Enables operation within portable devices, reducing power consumption
- **Low insertion loss: -1.16dB @16Gbps**  
Minimal attenuation of the signal
- **Very small 2.5x2.5mm footprint 2-to-1 differential mux**  
Allows for usage in space-constrained portable applications

#### Applications

- Servers/Storage Devices
- Embedded Systems
- Workstations
- Desktop PCs/Notebooks
- Networking Routers and Switches

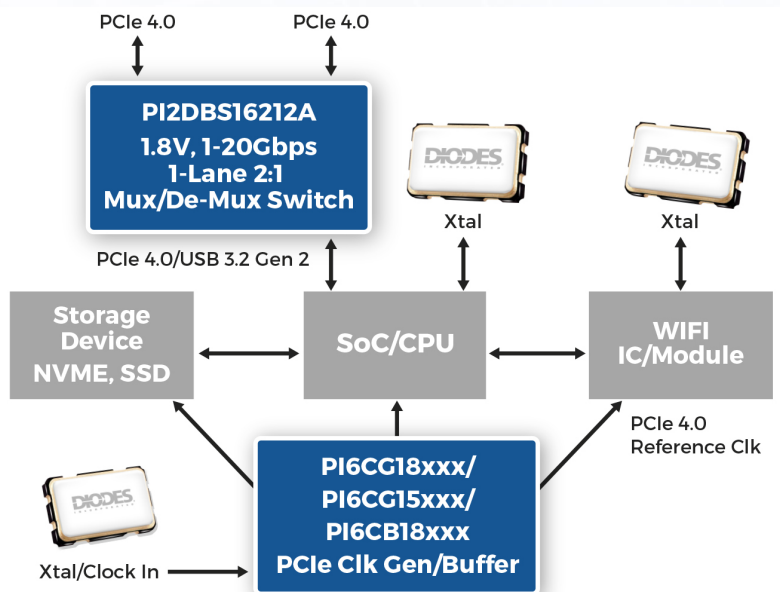
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## PI2DBS16212A

### System Block Diagram



### Product Portfolio

Part Number	Configuration	Differential Channel	Type	Voltage Supply	Temperature Range	Package
<a href="#">PI2DBS16212A</a>	Mux, 1:2	2	SPDT	1.8	-40 to 85°C	W-QFN2525-24
<a href="#">PI3DBS16212</a>	Mux, 1:2	2	SPDT	3.3		TQFN2545-20 X2-QFN2020-18

### Ordering Information

MPN	Package Code	Packaging	Moisture Sensitivity	Quantity per reel	Reel Size
PI2DBS16212AZREX	ZR24	W-QFN2525-24	MSL1	3,500	7"