



# New Product Announcement

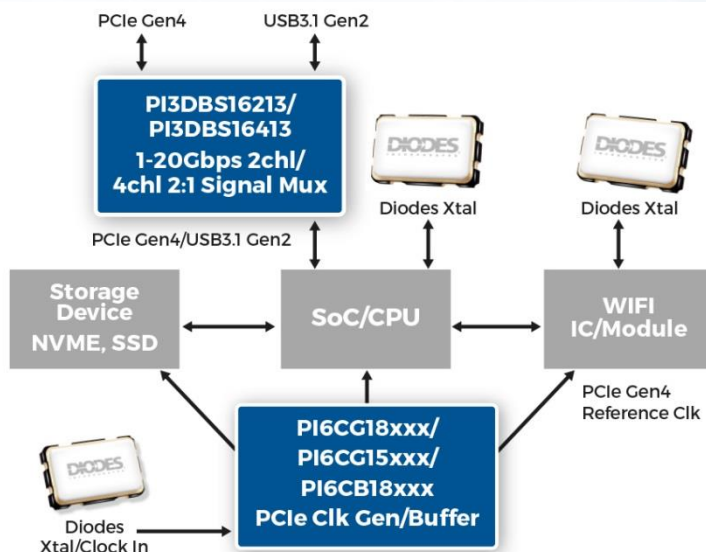
## PI3DBS16213/ PI3DBS16413

### PCIe Gen4 Thunderbolt 3 1-20Gbps Signal Mux

The PI3DBS16213 and PI3DBS16413 are parts of a family of very high-performance passive signal multiplexer/demultiplexer switches. This family can switch multiple serial protocols up to a data rate of 20Gbps.

Using a unique design technology, Diodes is able to minimize the impedance of the switch such that attenuation observed through the switch is minimal.

The unique technology also offers a layout targeted for USB3.1 Gen2, 10GE, PCIe Gen4, Thunderbolt™ 3 and SAS 3.0, which minimizes the channel-to-channel skew as well as channel-to-channel crosstalk, as required by high speed signal.



#### The Diodes Advantage

##### High frequency performance with flexible options

- **2 channel, 4 channel 2 to 1, 3 to 1 and 2x2 mux**  
Offers flexibility in terms of number of channels and routing
- **Very high -3dB Bandwidth of 13Ghz**  
Enables data rates up to 20Gbps
- **Low insertion loss: - 1.3dB@16Gbps**  
Minimal attenuation of the signal
- **Very small profile package: 2x2mm for 2 to 1 mux**  
Enables use in tight space constrained mobile applications.

#### Applications

- Server/Storage
- Embedded
- PC/Notebook
- Networking routers and switches

Thunderbolt is a trademark of Intel Corporation.



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PI3DBS16213/  
PI3DBS16413

## Product Portfolio

Part Number	Configuration	# of Diff Channels	Voltage Supply	Package	Temperature Range
PI3DBS16213ZL	1:3; flow-through pinout	2	3.3	30-TQFN (2.5 x 4.5mm)	-40 to 85°C
PI3DBS16213XEA	1:3; flow-through pinout	2		24-X1QFN (2 x 4mm)	
PI3DBS16413ZH	1:3; flow-through pinout	4		42-TQFN (3.5 x 9mm)	

## Ordering Information

MPN	Packaging	MOQ
PI3DBS16213ZLEX	20-TQFN	3,500
PI3DBS16213XEAEX	24-X1QFN	3,500
PI3DBS16413ZHEX	42-TQFN	3,500

## Further Information

PI3DBS16213: <https://www.diodes.com/part/PI3DBS16213>  
PI3DBS16413: <https://www.diodes.com/part/PI3DBS16413>