



# New Product Announcement

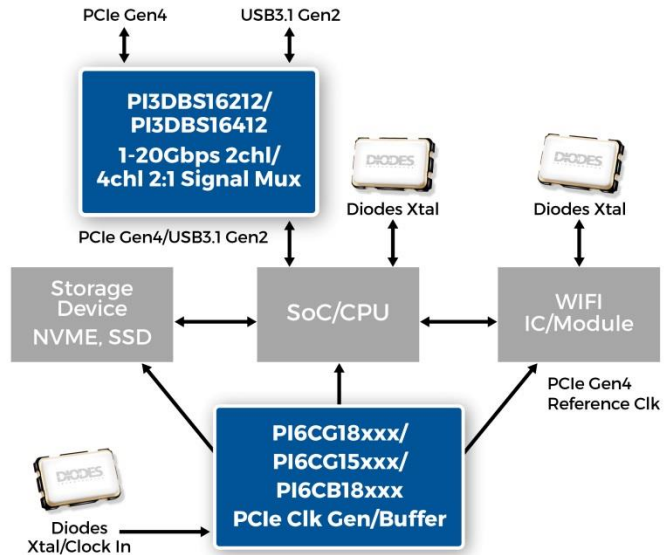
## PI3DBS16212/ PI3DBS16412

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

The PI3DBS16212 and PI3DBS16412 is part of a family of very high performance passive signal Mux/Demux. This family can switch multiple serial protocols up to data rate of 20Gbps.

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

The unique technology also offer 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 channels 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 and 4 to 1 mux**  
Offers flexibility in terms of number of channels and routing
- **Very high -3dB Bandwidth of 13Ghz**  
Enables data rates of up to 20Gbps
- **Internal 100V LDO to regulate V<sub>CC</sub> for wide range output application**  
Making lower BOM quantity and system design simplified
- **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.  
PCIe is a registered trademarks of PCI-SIG.



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**PI3DBS16212/  
PI3DBS16412**

## Product Portfolio

Part Number	Configuration	# of Diff Channel	Voltage Supply	Package	Temperature Range
PI3DBS16212ZBB	1:2; flow-through pinout	2	3.3	20-TQFN (2.5 x 4.5mm)	-40 to 85°C
PI3DBS16212XUA	1:2; flow-through pinout	2		18-X2QFN (2 x 2mm)	
PI3DBS16412ZH	1:2; flow-through pinout	4		42-TQFN (3.5 x 9mm)	
PI3DBS16412ZLC	1:2; flow-through pinout	4		40-TQFN (3 x 6mm)	

## Ordering Information

MPN	Packaging	MOQ
PI3DBS16212ZBBEX	20-TQFN	3,500
PI3DBS16212XUAEX	18-X2QFN	3,500
PI3DBS16412ZHEX	42-TQFN	3,500
PI3DBS16412ZLCEX	40-TQFN	3,500

## Further Information

PI3DBS16212: <https://www.diodes.com/part/PI3DBS16212>

PI3DBS16412: <https://www.diodes.com/part/PI3DBS16412>