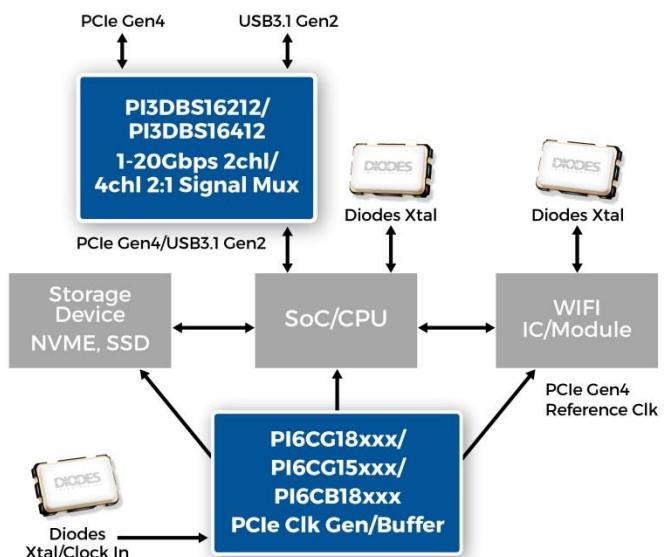


PCIe Gen4 Thunderbolt 3 1-20Gbps Signal Mux

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_{CC} 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.



New Product Announcement

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>