



New Product Announcement

PI2DBS32212

1.8V, 32Gbps, Two-Channel, 2:1 Mux/Demux Delivers Low-Loss and High-Speed Signal Switching

The DIODES™ PI2DBS32212 is a high-performance, high-speed, two-differential channel, analog, passive mux/demux switch.

The device can switch multiple serial protocols up to data rates of 32Gbps including PCIe® 5.0, USB4 Gen 2x1/Gen 3x1, Thunderbolt™ 3, and SAS4 signals.

Its bidirectional operation enables the PI2DBS32212 to operate as both a differential signal-path multiplexer and demultiplexer at data rates up to 32Gbps, offering low 10ps channel-to-channel skew.

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

The PI2DBS32212 is packaged in the tiny 2.5mm x 2.5mm X1QFN-24 package for space-constrained applications.

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The DIODES™ Advantage

Enables up to 32Gbps high-performance signal multiplexing, even at 1.8V for reduced power consumption.

- **Two-Differential Channel, 2-to-1 Mux and 1-to-2 Demux**
Offers flexibility in number of channels and routing capabilities
- **Supports Multiple Serial Protocols of up to 32Gbps**
PCIe 5.0, USB4 Gen 2x1/Gen 3x1, Thunderbolt, and SAS3/SAS4 signals
- **Low 1.8V Supply Voltage**
Enables operation within portable devices, reducing power consumption
- **Low Insertion and Return Losses: -2.7dB @ 16GHz and -10.8dB @ 16GHz**
Reduces signal attenuation
- **Very Small 2.5x2.5mm Footprint for 2-to-1 Differential Muxes**
Offers high-density solutions for portable applications

Applications

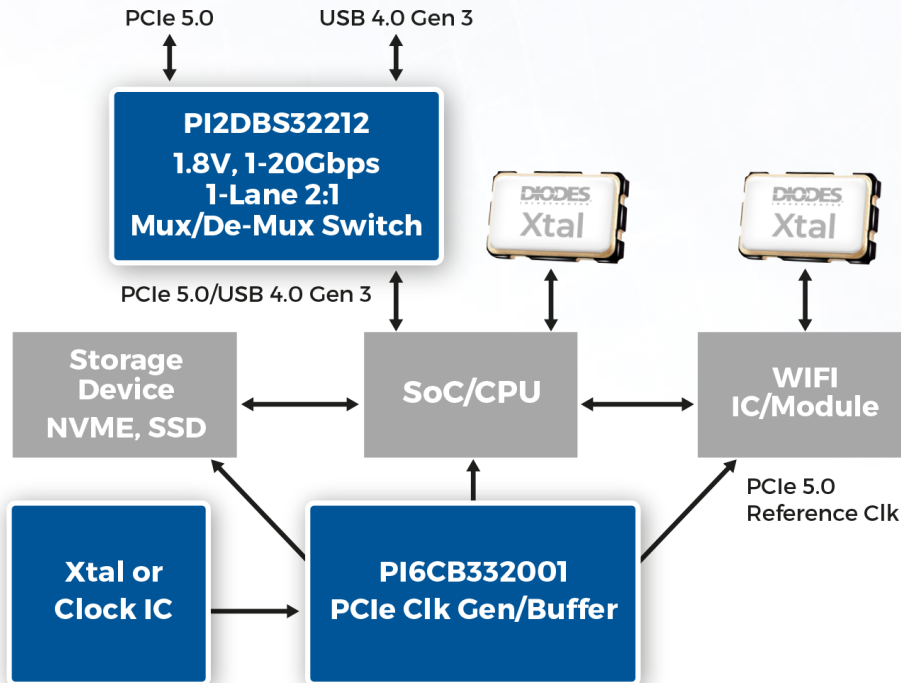
- Servers
- Storage devices
- Networking systems
- Workstations
- High-performance PCs
- All-in-one PCs
- Desktops
- Laptops



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Typical Application



Product Portfolio

Part Number	Configuration	Data Rates	Differential Channels	Type	Voltage Supply	Temperature Range	Package
PI2DBS32212	Mux, 1:2	32Gbps	2	SPDT	1.8	-40 to 85°C	X1QFN-24L, 2.5mmx2.5mm
PI2DBS16212A	Mux, 1:2	20Gbps	2	SPDT	1.8		TQFN-24L 2.5mmx2.5mm

Ordering Information

Orderable Part Number	Package Code	Package	Moisture Sensitivity	Quantity Per Reel	Reel Size
PI2DBS32212XEBEX	XEB24	X1QFN2525-24	MSL1	3,500	7"