



# New Product Announcement

PI3EQX16612/  
PI3EQX16621

## 16Gbps PI3EQX16612 DeMux & PI3EQX16621 Mux ReDriver Boost Signal Quality of High-speed PCIe 4.0 Interfaces

The PI3EQX16612 (DeMux) PI3EQX16621 (Mux) are 16Gbps linear ReDriver™ devices compliant with PCIe 4.0 and backwards compatible with PCIe 3.0/2.0/1.0.

Both have four differential channels providing programmable linear equalization, output swing and flat gain. The equalization is controlled by pin-strapping and optimizes performance over a variety of physical media by reducing inter-symbol interference.

The PI3EQX16612/16621 are used to extend PCB trace lengths while minimizing cost and power consumption. It can also deliver lower latency.

Operating from a supply voltage of 3.3V, the device operates over the industrial temperature range of -40°C to +85°C.

ReDriver™ is a trademark of Diodes Incorporated.



### The Diodes Advantage

- **16Gbps, 4-channel linear equalization**  
Supports PCIe 4.0 and backward compatible to PCIe 3.0/2.0/1.0.
- **PI3EQX16612 is 1 to 2 DeMux/PI3EQX16621 is 2 to 1 Mux**  
Use as a pair to support more PCIe 4.0 slots with limit PCIe 4.0 ports of CPU/SoC.
- **Equalizer can boost up to 14.8dB to compensate channel signal loss**  
Extends PCB trace lengths while minimizing cost, power and reduces signal latency.
- **Independent channel configuration of receiver equalization, output swing, and flat gain**  
Maximizes the compensation of signal loss with different trace behaviors and conditions.

### Applications

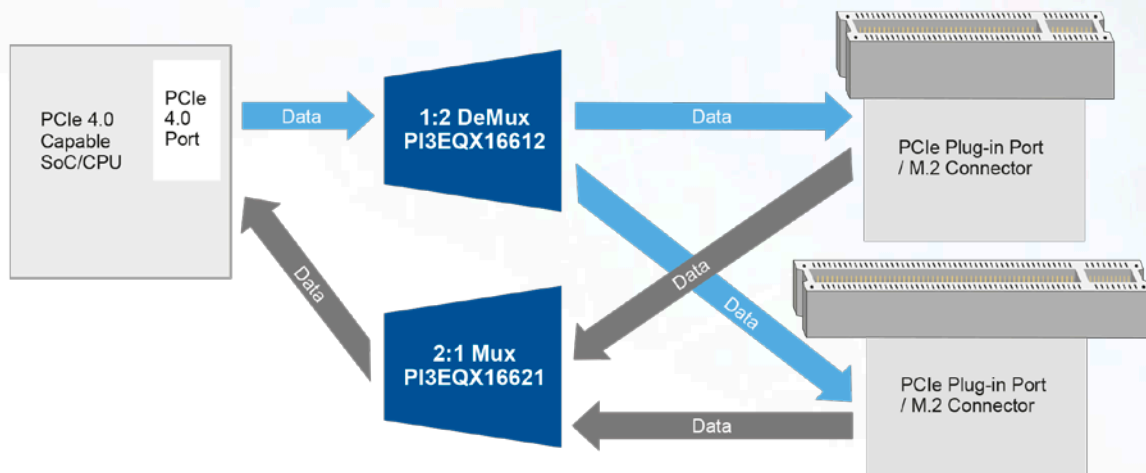
- Motherboard
- PC
- Workstation
- CPU-to-network (PCIe NIC card)
- CPU-to-storage (NVME)
- Embedded System



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## Application Diagram in PC/Embedded System



## PCIe 4.0 ReDriver Portfolio

Part number	Description	Package
PI3EQX16612	PCIe 4.0, 16Gbps, 4 channel ReDriver, 1:2 DeMux	TQFN-40L
PI3EQX16621	PCIe 4.0, 16Gbps, 4 channel ReDriver, 2:1 Mux	TQFN-40L
PI3EQX16904GL	PCIe 4.0, 16Gbps, 4 channel ReDriver	TQFN-42L
PI3EQX16908GL	PCIe 4.0, 16Gbps, 8 channel ReDriver	TQFN-72L

To find out more information:

<https://www.diodes.com/part/PI3EQX16612> ,

<https://www.diodes.com/part/PI3EQX16621>

## Ordering Information

Ordering Code	Packaging Code	Package Description	Quantity per reel	Reel Size
PI3EQX16612ZLDEX	ZLD	40-contact TQFN (6mm x 3mm, 0.75mm)	3500	13"
PI3EQX16621ZLDEX	ZLD	40-contact TQFN (6mm x 3mm, 0.75mm)	3500	13"