The PI3EQX16612 (DeMux) and 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 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

www.diodes.com
Announcement

New Product

PI3EQX16612/PI3EQX16621

Application Diagram in PC/Embedded System

PCIe 4.0 ReDriver Portfolio

<table>
<thead>
<tr>
<th>Part number</th>
<th>Description</th>
<th>Package</th>
</tr>
</thead>
<tbody>
<tr>
<td>PI3EQX16612</td>
<td>PCIe 4.0, 16Gbps, 4 channel ReDriver, 1:2 DeMux</td>
<td>TQFN-40L</td>
</tr>
<tr>
<td>PI3EQX16621</td>
<td>PCIe 4.0, 16Gbps, 4 channel ReDriver, 2:1 Mux</td>
<td>TQFN-40L</td>
</tr>
<tr>
<td>PI3EQX16904GL</td>
<td>PCIe 4.0, 16Gbps, 4 channel ReDriver</td>
<td>TQFN-42L</td>
</tr>
<tr>
<td>PI3EQX16908GL</td>
<td>PCIe 4.0, 16Gbps, 8 channel ReDriver</td>
<td>TQFN-72L</td>
</tr>
</tbody>
</table>

To find out more information:
https://www.diodes.com/part/PI3EQX16612
https://www.diodes.com/part/PI3EQX16621

Ordering Information

<table>
<thead>
<tr>
<th>Ordering Code</th>
<th>Packaging Code</th>
<th>Package Description</th>
<th>Quantity per reel</th>
<th>Reel Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>PI3EQX16612ZLDEX</td>
<td>ZLD</td>
<td>40-contact TQFN (6mm x 3mm, 0.75mm)</td>
<td>3500</td>
<td>13”</td>
</tr>
<tr>
<td>PI3EQX16621ZLDEX</td>
<td>ZLD</td>
<td>40-contact TQFN (6mm x 3mm x 0.75mm)</td>
<td>3500</td>
<td>13”</td>
</tr>
</tbody>
</table>