



# New Product Announcement

## PI3UPI1608

### 8-Channel ReDriver with Internal Coupling Capacitors Boosts Signal Quality of High-Speed UPI Interfaces

The PI3UPI1608 is a UPI 2.0-compliant linear ReDriver™ with integrated coupling capacitors supporting up to 20Gbps data rate.

It has eight differential channels each with programmable linear equalization, output swing, and flat gain. The equalization is controlled by either a pin-strapping option or I2C control to optimize performance across a variety of physical media by reducing intersymbol interference.

The PI3UPI1608 extends PCB trace lengths while minimizing cost and power consumption and delivering lower latency.

The internal coupling capacitors of the PI3UPI1608 simplify PCB trace routing and reduces associated component count.

It operates from 3.3V power supply in a -40°C to +85°C temperature range.



#### The Diodes Advantage

- **20Gbps, 8-channel linear equalizer**  
Supports UPI 2.0, 20Gbps, and PCIe® 4.0, 16Gbps protocol.
- **Extends PCB trace lengths while minimizing cost, power, and reducing signal latency**  
Embedded coupling capacitors simplifies trace routing and saves component count.
- **Independent channel configuration of receiver equalization, output swing, and flat gain**  
Compensates signal loss of PCB trace length with different settings.
- **Pin-strap and I2C selectable device programming**  
Provides easy design without the need for heavy firmware support.

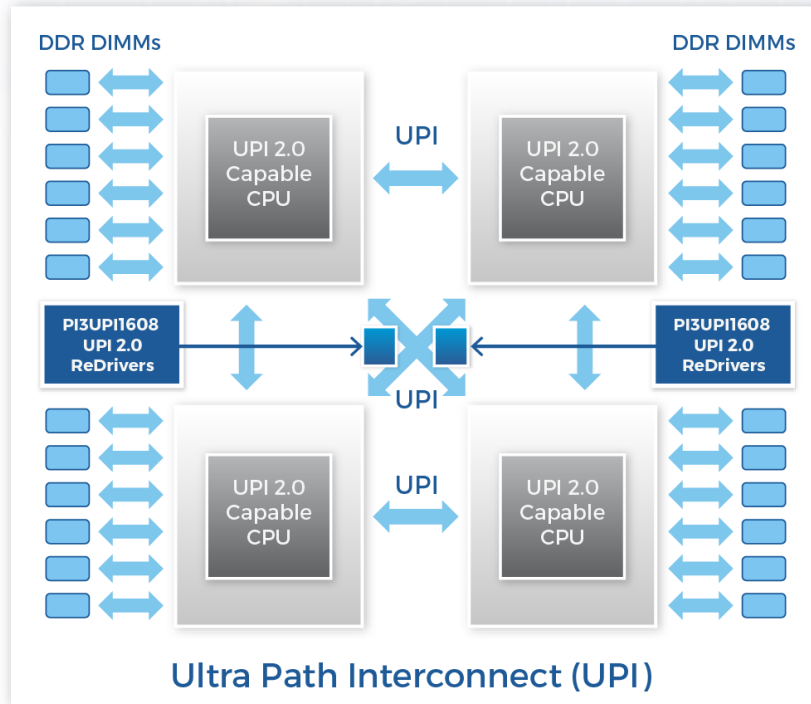
#### Applications

- Servers
- Storage
- Networking
- Workstations
- High Performance PCs
- CPU-to-Network (PCIe NIC Card)
- CPU-to-Storage (NVME) Interconnects
- CPU-to-CPU Interconnects (Compute Clusters)

ReDriver™ is a trademark of Diodes Incorporated.

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### Block Diagram in Server



UPI ReDriver boosts signal integrity between two long-trace length CPUs

### UPI ReDriver Portfolio

Part Number	Description	Protocol	Channels	Data Rate (Gbps)	Lanes /Ports	Max Output Swing (mV)	Programming Interfaces	Packages
<a href="#">PI3UPI1608</a>	3.3V PCIe 4.0 & UPI 2.0 Linear ReDriver with internal coupling capacitors	PCI Express 4.0	8	20	4	750	Pinstrap, I2C master/ Slave	V-QFN70135-116 (ZXC116)

### Ordering Information

Part Number	Compliance	Packaging Code	Package Description	Moisture Sensitivity	Quantity per reel	Reel Size
PI3UPI1608ZXCEX	Standard	ZXC	V-QFN70135-116	MSL-3	4000	13"