DIODES
I N C O R P O R A T E D ®

Eight-Channel ReDriver Boosts Signal Quality of High-Speed PCIe 5.0, SAS4, and CXL Interfaces
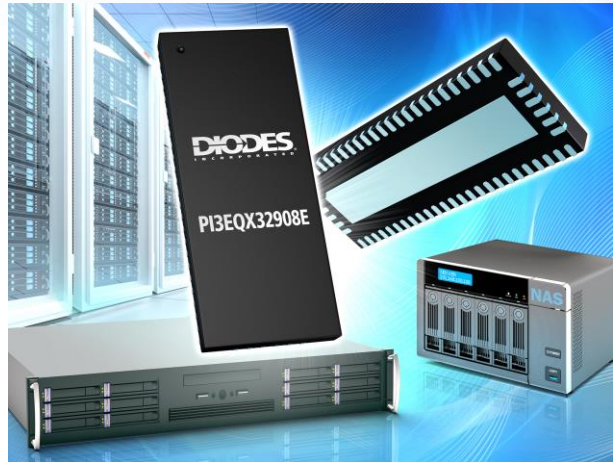
The PI3EQX32908E is an eight-channel linear ReDriver™ compliant with PCIe© 5.0, SAS4, and CXL protocols.

It meets modern standby mode requirements outlined by Microsoft® Corporation and delivers elevated linearity and ultra-low jitter characteristics.

The PI3EQX32908E provides programmable linear equalization, output swing, and flat gain. The equalization is controlled by either a pin-strapping option or I2C-control and optimizes performance over a variety of physical media by reducing inter-symbol interference.

It supports I2C Master Mode for external EEPROM and enables up to 16 masters connected in a daisy chain.

Operating from a 3.3V supply voltage, the PI3EQX32908E operates over the -40ºC to +85ºC industrial temperature range and is packaged in the W-QFN3590-62 package.

The DIODES Advantage

High-performance linear ReDriver, of up to 32Gbps with modern standby mode, reduces power consumption.

- **32Gbps, Eight-Channel, Linear Equalizer**
  Supports PCIe 5.0, SAS4, and CXL protocols

- **Modern Standby Mode**
  Enables power consumption of less than 5mW when system is in deep standby mode

- **Adjustable Linear Equalization, Output Swing, and Flat Gain**
  Extends PCB trace lengths while reducing signal latency and minimizing cost and power

- **Pin-Strap and Selectable I2C-Master/Slave Device Programming**
  Supports I2C Master Mode for external EEPROM and enables up to 16 masters connected in daisy chain

- **Features Automatic Receiver Detection and "Low-Power" Mode for Adaptive Power Management**
  Allows the device to go into low-power mode when signal is inactive

Applications
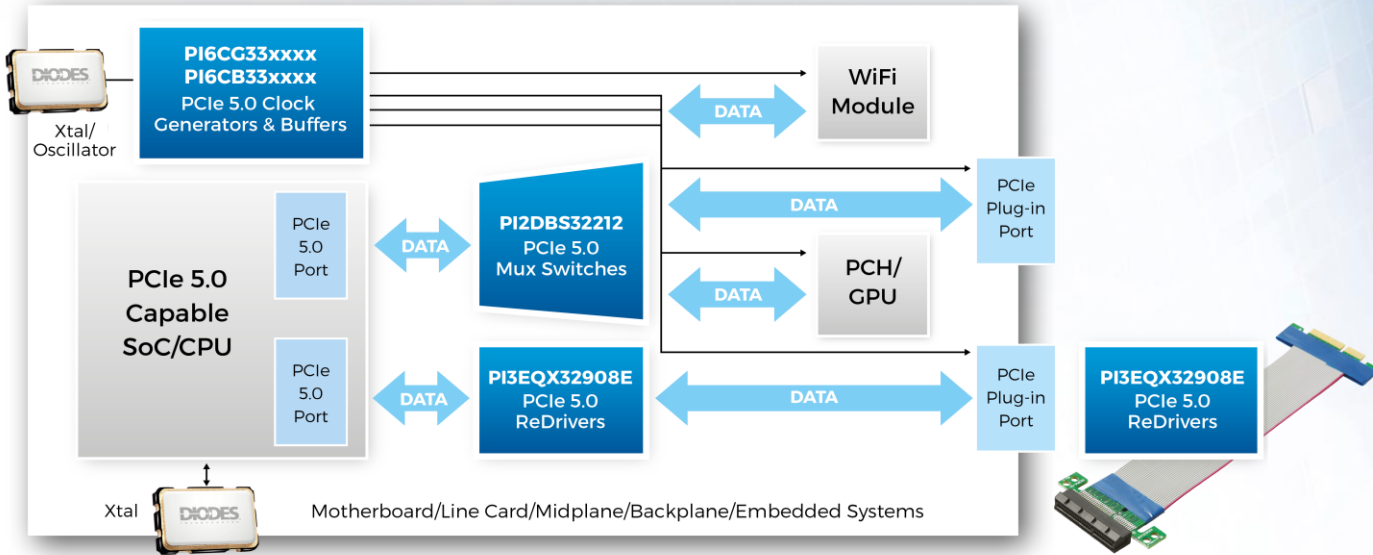
- Servers
- Storage devices
- Networking systems
- Workstations

- High-performance PCs
- All-in-one PCs
- Desktops
- Laptops

Typical Application

PCIe5.0 ReDriver Portfolio

Part Number	Channels	Data Rate Gbps	Protocols	Programming Interface	Package
PI3EQX32908E	**8 In/8 Out**	**32**	**PCIe 5.0, SAS4/UPI, CXL**	**I2C Master/Slave & Pin Strap**	**W-QFN3590-62**
PI3EQX32908	8 In/8 Out	32	PCIe 5.0, SAS4	I2C & Pin Strap	W-QFN3590-62
PI3EQX32904	4 In/4 Out	32	PCIe 5.0, SATA3, SAS4	I2C	W-QFN3063-46

Ordering Information

Orderable Part Number	Compliance (Only Automotive Supports PPAP)	Package Code	Package	Moisture Sensitivity	Packing	
					Quantity	Carrier
PI3EQX32908EZRIEX	Standard	ZR62	W-QFN3590-62 (9mm x 3.5mm)	MSL-3	3,500	13'' Tape & Reel