



New Product Announcement

PI3EQX12902E
PI3EQX12904E

8-Gbps, 1/2 Lane, PCIe 3.0 and SATA3, Combo ReDrivers Support Modern Standby Mode

The PI3EQX12902E and PI3EQX12904E are 8Gbps linear ReDrivers™ that have 1 and 2 lanes respectively and are compliant with PCIe® 3.0 and SATA3 protocols.

These ReDrivers meet the Modern Standby mode requirements outlined by Microsoft Corporation and deliver elevated linearity and ultra-low jitter characteristics.

They provide 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 PI3EQX12902E/EQX12904E are used to extend PCB trace lengths while minimizing cost and power consumption. The devices can also deliver lower latency.

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

The PI3EQX12902E and PI3EQX12904E are available in the 30-TQFN (4.5mm x 2.5mm) and 42-TQFN (9mm x 3.5mm) packages respectively.

ReDriver™ is a trademark of Diodes Incorporated.

PCI Express® and PCIe® are trademarks or registered trademarks and/or service marks of PCI-SIG Corporation.



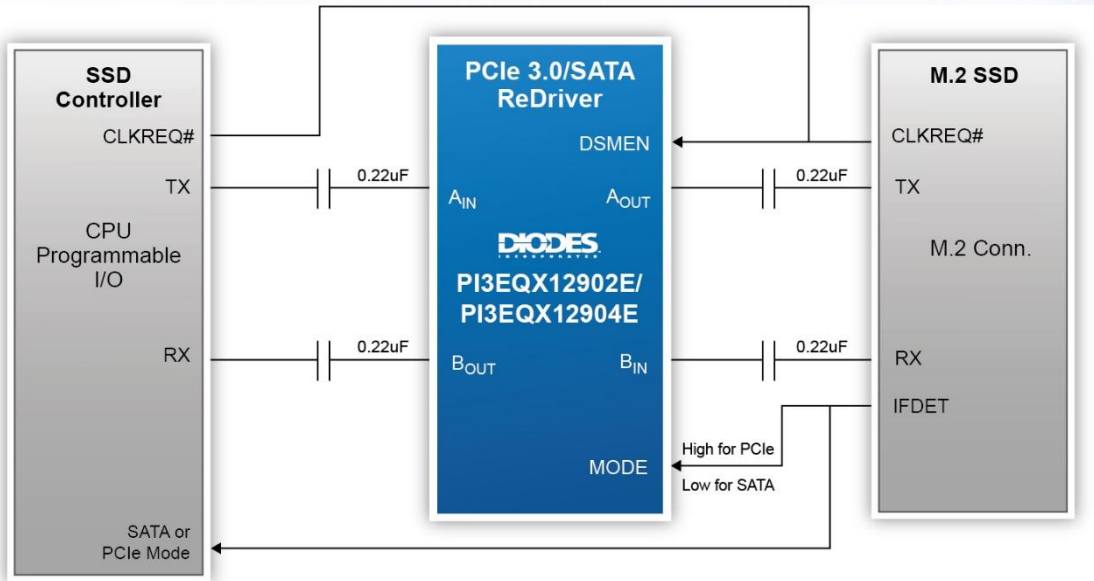
The Diodes Advantage

- **Up to 8Gbps, linear equalizer, supports PCIe 3.0 and SATA3 protocol**
PI3EQX12902E: 1 lane/2 channels
PI3EQX12904E: 2 lanes/4 channels
- **Support Modern Standby Mode**
Less than 5mW power consumption when system is in deep standby mode
- **Programmable linear equalization, output swing, and flat gain**
Extends PCB trace lengths while reducing signal latency and minimizing cost and power
- **Independent channel configuration of receiver equalization, output swing, and flat gain**
Compensates signal loss of PCB trace length with different settings
- **Supports automatic receiver detection and "low power" mode for adaptive power management**
Device goes into low power mode when signal is not active

Applications

- Laptop PCs
- All-in-one PCs
- Desktop PCs
- IPCs
- Storage
- Embedded systems

Application Diagram



8Gbps, PCIe 3.0/SATA3 Combo ReDrivers

Part Number	Description	Protocol List	Channels	Data Rate (Gbps)	Lanes/ Ports	Output Swing Max (mV)	Programming Interface(s)
PI3EQX12902E	8 Gbps 3.3V, PCIE3/SATA3 Low Power Linear ReDriver, Modern Standby Mode	SATA3, PCIe 3.0	2 in/2 out	8	1 in/1 out	1000	Pinstrap
PI3EQX12904E		SATA3, PCIe 3.0	4 in/4 out	8	2 in/2 out	1000	Pinstrap

Ordering Information

Orderable Part Number	Compliance (Only Automotive support PPAP)	Packaging Code	Package Description	Moisture Sensitivity	Quantity per reel	Reel Size
PI3EQX12902EZLEX	Standard	ZL	30-contact TQFN (4.5mm x 2.5mm)	MSL1	3500	13"
PI3EQX12904EHEX	Standard	ZH	42-contact TQFN (9mm x 3.5mm)	MSL1	3500	13"