New Product Announcement

PI2EQX16934
PI2EQX16932

1.8V, 16Gbps, 2/1 Lane, PCIe 4.0 Linear ReDriver™ Provides Lower-Power Operation for Portable and PC Applications

The PI2EQX16934 and PI2EQX16932 are, respectively, 2/1 lane, 16Gbps, 1.8V low-power linear ReDrivers compliant with PCIe® 4.0 and are backward compatible with PCIe 1.0, 2.0, and 3.0.

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

The PI2EQX16934 and PI2EQX16932 are used to extend PCB trace lengths while decreasing power consumption with minimal latency. Their adjustable linear equalization, output swing, and flat gain are controlled by I2C and optimize performance over a variety of physical media by reducing intersymbol interference.

Operating from a supply voltage of 1.8V, the devices substantially lower active-current consumption, and coupled with their automatic power down, provide up to a 40% lower power solution to PCIe 4.0 portable applications.

The PI2EQX16934 and PI2EQX16932 operate across the industrial temperature range of -40ºC to +85ºC and are available in the very small 32-contact, 2.85mm x 4.5mm X2QFN (XUA32) package.

The DIODES Advantage

This very small high-performance ReDriver reduces power and improves signal integrity of high-speed (up to 16Gbps) PCIe data paths.

- **Up to 16Gbps, PCIe 4.0 Linear Equalizer**
  PI2EQX16934: Supports 2 lanes/4 channels
  PI2EQX16932: Supports 1 lane/2 channels
- **Modern Standby (L1.2) Mode**
  Enables less than 5mW of power consumption 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, power
- **Supports Automatic Receiver Detection with a 1.2mW Low Power Mode for Adaptive Power Management**
  Substantially reduces data line power consumption when signal is not active/present
- **Pin Compatible in the Ultra-Small (2.85mm X 4.5mm) X2QFN (XUA32) Package**
  Supports high-density channel routing and are interchangeable with one another

Applications

- Laptop PCs
- All-in-one PCs
- Desktop PCs
- IPC systems
- SSD storage
- Embedded systems

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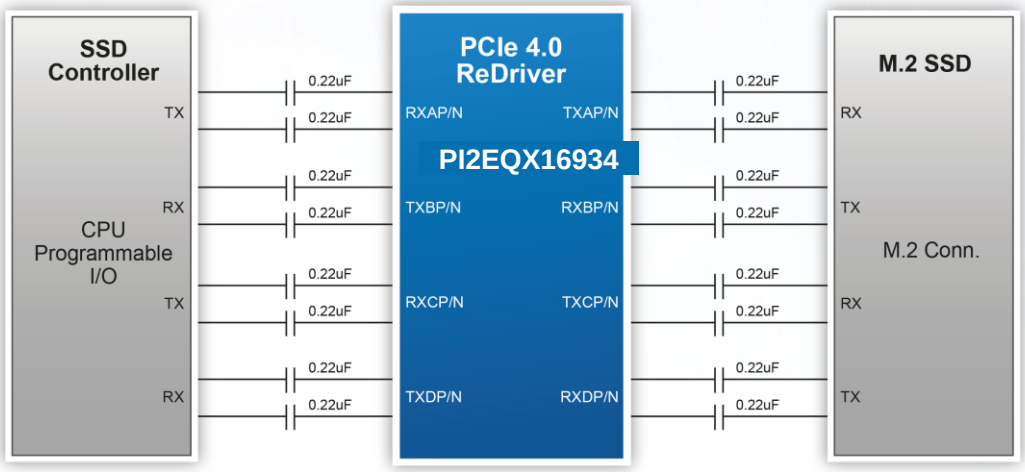
Typical Application



PCIe 4.0 ReDriver Portfolio

Part Number	Supply Voltage	Channels	Data Rate	Output Swing Max	Programming Interface(s)	Package
	V		Gbps	mV		
PI2EQX16932	**1.8**	**2**	**16**	**1,200**	**I2C Slave Mode**	**X2QFN (XUA32)**
PI2EQX16934	**1.8**	**4**	**16**	**1,200**	**I2C Slave Mode**	**X2QFN (XUA32)**
PI3EQX16904GL	3.3	4	16	1,200	Pinstrap/I2C Master/Slave	TQFN (ZH42)
PI3EQX16908GL	3.3	8	16	1,200	Pinstrap/I2C Master/Slave	TQFN (ZL72)

Ordering Information

Orderable Part Number	Compliance (Only Automotive supports PPAP)	Package Code	Package	Moisture Sensitivity	Packing	
					Quantity	Carrier
PI2EQX16932XUAEX	Standard	XUA32	32-contact X2QFN (2.85mm x 4.5mm)	MSL-1	3,500	13'' Tape & Reel
PI2EQX16934XUAEX	Standard	XUA32	32-contact X2QFN (2.85mm x 4.5mm)	MSL-1	3,500	13'' Tape & Reel