New Product Announcement

PI2MEQX2503

2.5Gbps, Low-Power, Two Data-Lane MIPI D-PHY ReDriver Optimized for Portable Computing and Media Applications

The PI2MEQX2503 is a 1.8V low-power, 2.5Gbps MIPI ReDriver™ that supports MIPI® D-PHY 1.2 specification.

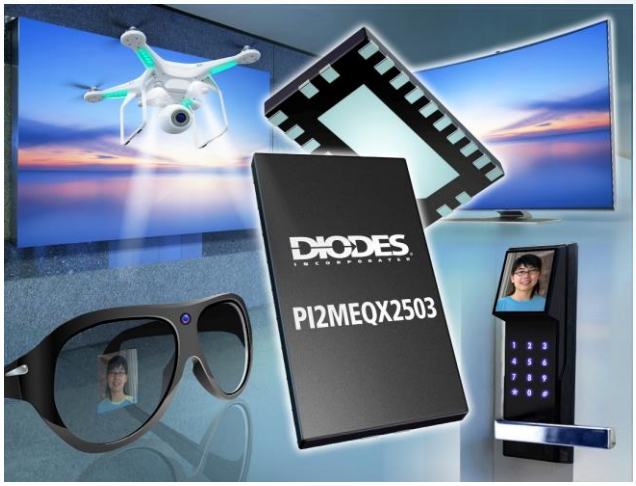
It has two differential channels, each with programmable receiver equalization, output swing, and pre-emphasis. The equalization is controlled by either I2C or pin strap. This optimizes performance over a variety of physical media by reducing inter-symbol interference.

The PI2MEQX2503 extends PCB trace lengths while minimizing power consumption with minimal latency.

The device's output voltage swing and edge rate can be adjusted through pin strapping. It is optimized for mobile applications, and contains activity detection circuitry on the D-PHY link interface that can transit into a lower power mode when in ULPS and LP states.

Operating from a supply voltage of 1.8V, the device operates over the industrial temperature range of -40 to +85ºC.

The PI2MEQX2503 is available in the very small X1-QFN-24 (XEA24) package, occupying only 2mm x 4mm board space.



The DIODES Advantage

This low-power MIPI ReDriver improves signal integrity of high-speed (up to 2.5Gbps) D-PHY data paths.

- **Up to 2.5Gbps, Two Data Lanes Equalizer + One Clock Lane**
  Supports MIPI D-PHY 1.2 specification
- **Low Power Consumption by Supporting ULPS and LP States, as well as a Sub-mW Shutdown State**
  Optimized for D-PHY data paths in mobile and battery-powered applications
- **Programmable Receiver Equalization, Output Swing, and Pre-Emphasis**
  Extends PCB trace lengths while reducing signal latency and minimizing cost and power
- **Very Small X1-QFN-24 (XEA24) Package (2mm x 4mm)**
  Supports high-density channel routing

Applications

Improved signal integrity of D-PHY data paths in:

- Laptops, all-in-one PCs
- Drones, robots
- TVs, commercial displays
- Smart home devices
- IoT
- AR glasses
- Embedded systems

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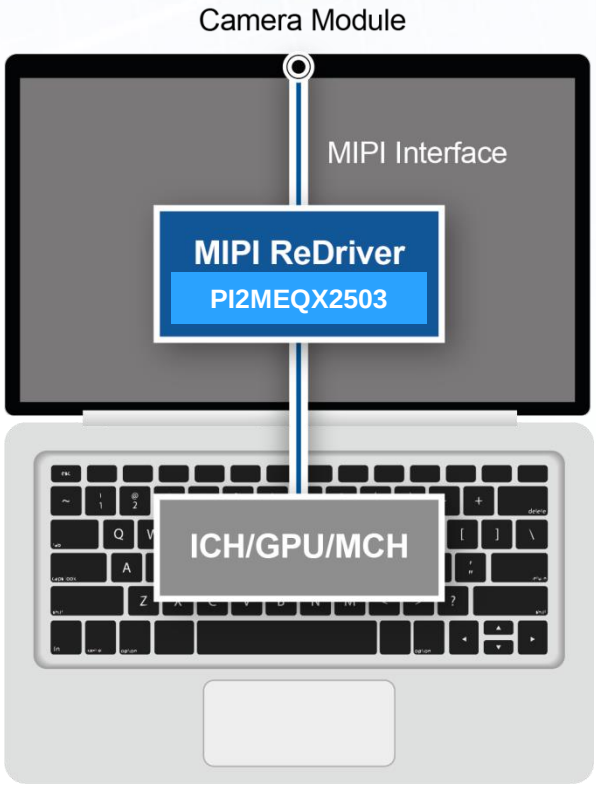
Typical Application



MIPI ReDriver Portfolio

Part Number	Operating Voltage	Data Rate	Lanes	Max Output Swing	Programming Interface	Operating Temperature Range	Package
		Gbps		mV			
PI2MEQX2503	**1.8V**	**2.5**	**2**	**275**	**I2C/ Pin strap**	**-40°C to +85°C**	**X1-QFN-24 (XEA24)**
PI2MEQX2505	1.8V	2.5	4	275	I2C/ Pin strap	-40°C to +85°C	TQFN-28

Ordering Information

Orderable Part Number	Compliance (Only Automotive Supports PPAP)	Package Code	Package	Moisture Sensitivity	Packing	
					Quantity	Carrier
PI2MEQX2503XEAEX	Standard	XEA24	X1QFN-24 (2mm x 4mm x 0.5mm, 0.4mm pitch)	MSL-1	3,500	13'' Tape & Reel