

## PI2MEQX2503A

2.5Gbps, MIPI CSI-2/DSI D-PHY ReDriver

### Description

The PI2MEQX2503A is a low power, high performance 2.5Gbps two lanes data and clock MIPI D-PHY ReDriver™. The device complies with MIPI D-PHY1.2 standard and can be used in either a MIPI CSI-2 or MIPI DSI application at data rates of up to 2.5Gbps in D-PHY.

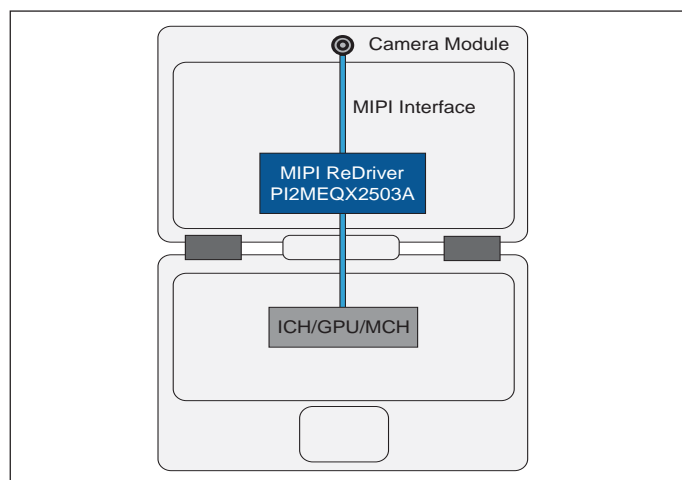
The device compensates for PCB, connector, and cable related loss and switching related loss to provide the optimum electrical performance from a CSI2/DSI source to sink. The inputs of PI2MEQX2503A's feature configurable equalizers.

The PI2MEQX2503A output voltage swing and edge rate can be adjusted by changing the pin state. 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.

### Application(s)

- Laptops, All-in-one PCs
- Drones, Robots
- TVs, Commercial Displays
- Smart Home Devices
- AR Glasses
- Embedded Systems

### Typical MIPI Re-Driver in NB Application



### Features

- MIPI D-PHY1.2 Specification Compliant
- Enables Low-Cost Cable Solutions
- Supports 2-Lanes at 2.5Gbps in D-PHY
- Sub mW Power in Shutdown State
- Supports MIPI DSI Bi-Directional LP Mode
- Supports ULPS and LP Power States
- Supports I2C Slave Mode Setting
- Pin Strap Value Sampled on Rising Edge of RSTN
- Adjustable Output Voltage Swing
- Selectable TX Pre-Emphasis Levels
- Adjustable Rx EQ to Compensate Insertion Loss
- Configurable Edge Rate Control
- Dynamic Data Compensation
- Industrial Temperature Range: -40°C to 85°C
- Available in Single 1.8V - Supply
- Packaging (Pb-free & Green):
  - 24-pin, 2mm x 4mm, X1QFN (XEA)
- Totally Lead-Free & Fully RoHS Compliant (Notes 1 & 2)
- Halogen and Antimony Free. "Green" Device (Note 3)
- For automotive applications requiring specific change control (i.e. parts qualified to AEC-Q100/101/104/200, PPAP capable, and manufactured in IATF 16949 certified facilities), please [contact us](mailto:contact@diodes.com) or your local Diodes representative. <https://www.diodes.com/quality/product-definitions/>

### Ordering Information

Orderable Part Number	Package Code	Package Description
PI2MEQX2503AXEAEX	XEA	24-contact, Extra Thin Fine Pitch QFN (X1QFN)

#### Notes:

- E = Pb-free and Green
- X suffix = Tape/Reel

#### Notes:

1. No purposely added lead. Fully EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant.
2. See <https://www.diodes.com/quality/lead-free/> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

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