

PI2MEQX2505Q

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

Description

The PI2MEQX2505Q is a low power, high performance 2.5Gbps four lanes data and clock MIPI D-PHY ReDriver™ designed specifically for MIPI D-PHY 1.2 protocol.

The device provides programmable equalization, output swing and pre-emphasis to optimize performance over a variety of physical mediums by reducing Inter-Symbol Interference. PI2MEQX2505Q supports MIPI D-PHY 1.2 standard with 100Ω differential CML data I/O between CSI-2 Source and CSI-2 Sink, over cable, or to extend the signals across other distant data pathways on the user's platform. It also supports pin adjustable on receiver equalization and edge rate on transmitter rise and fall time.

PI2MEQX2505Q 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.

Features

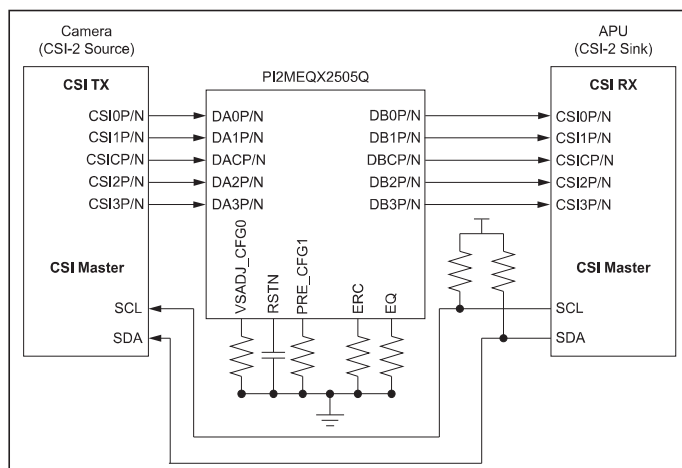
- MIPI D-PHY 1.2 Specification Compliant
- Supports 4-Lanes at 2.5Gbps in D-PHY
- Supports ULPS and LP Power States and Sub-mW in Shutdown State
- Supports MIPI DSI Bi-Directional LP Mode
- Programmable and Pin Adjustable on Receiver Equalization and Transmitter Edge Rate
- Programmable Output Swing and Pre-Emphasis Levels
- AEC-Q100, Grade 2: -40°C to 105°C
- Packaging (Pb-free & Green):
 - 28-Pin, 3.5 x 5.5mm, Wettable W-QFN (ZHW)
- Totally Lead-Free & Fully RoHS Compliant (Notes 1 & 2)
- Halogen and Antimony Free. "Green" Device (Note 3)
- The PI2MEQX2505Q suitable for automotive applications requiring specific change control; this part is AEC-Q100 qualified, PPAP capable, and manufactured in IATF 16949 certified facilities.

<https://www.diodes.com/quality/product-definitions/>

Application(s)

- Advanced Driver Assistance Systems (ADAS)
- Camera Monitor Systems

Application Schematic



Ordering Information

Orderable Part Number	Package Code	Package Description
PI2MEQX2505Q2ZHWEX	ZHW	28-Pin, W-QFN3555-28 (SWP)

Notes:

1. Q = Automotive Compliant
2. 2 = AEC-Q100 Grade Level
3. E = Pb-free and Green
4. 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.
4. Automotive products are AEC-Q100 qualified and are PPAP capable. Refer to <https://www.diodes.com/quality/>.