

Four-Data Lanes plus Clock 2:1 Switch for High-Speed MIPI Applications

PI3WVR648 is a four-data lane plus clock, MIPI 2:1 switch that supports both high-speed (HS) and low-power (LP) MIPI for image sensors and cameras in smartphones and displays in mobile applications

It has 10 channels of single-pole, double-throw (SPDT) switch and is optimized for rapid switching between HS and LP MIPI physical interfaces.

The PI3WVR648 allows connection to CSI/DSI and C-PHY/D-PHY modules.

To support high-speed D-PHY/ C-PHY applications and provide the best performance in the market, the device has a 6GHz bandwidth, low crosstalk, low R_{ON} , and low channel-to-channel skew. These provide little signal degradation for C-PHY/D-PHY applications.

The device also provides low-current consumption to meet the requirements of low-power applications, including cell phones and other personal electronics.



DIODES Advantage

- Four-Data Lane plus Clock, 2:1 Switches Support both D-PHY and C-PHY**
 - ✓ Flexible to upgrade camera for below two use cases
 - ✓ From low-data rate D-PHY camera to high-data rate C-PHY camera
 - ✓ Change D-PHY camera to C-PHY camera
- Fast Data Rates Supported: PI3WVR648 Provides the Best Performance in the Market up to 3.5Gbps C-PHY and up to 4.5Gb/s D-PHY**
 - ✓ Enables higher data rates and higher resolution cameras
- Lower R_{ON} : 5.0Ω LP & HS MIPI**
 - ✓ Better insertion loss performance
- Low Crosstalk: -28dB @ 2.25GHz**
 - ✓ Lower crosstalk between channels for better performance, high-speed C-PHY/D-PHY signal
- V_{DD} Operating Range: 1.5V to 5V**
 - ✓ Works across multiple I/O voltage rails, improving ease of use in different system designs

Applications

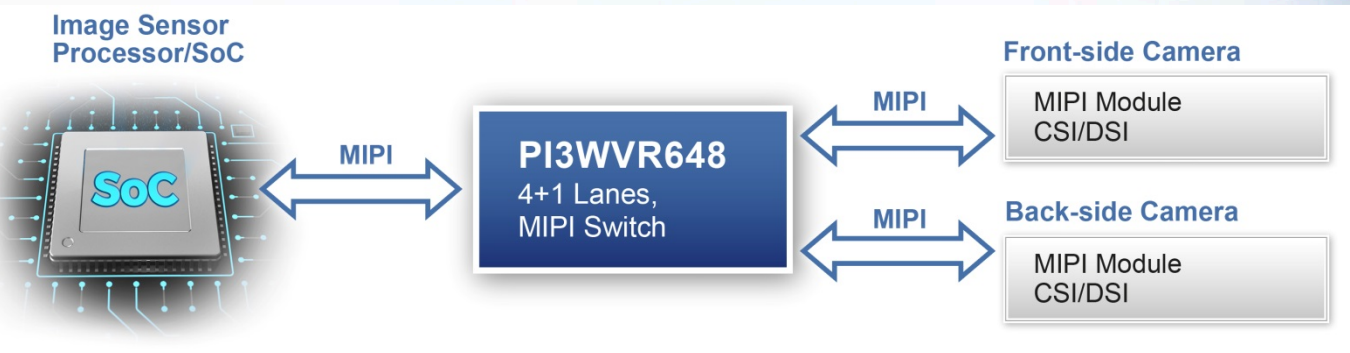
- Multi-MIPI Interface Design in Cell Phones, Tablets, Laptops
 - MIPI Camera
 - MIPI Display



New Product Announcement

PI3WVR648

Block Diagram



Portfolio

Part Numbers	Configuration	Differential Channels	-3db Bandwidth	Crosstalk	Package
PI3WVR648	2:1 Mux	5	6GHz	-28db @ 2.25GHz	36-Ball, 2.44 x 2.44 (WLCSP)
PI3WVR646	2:1 Mux	5	4.5GHz	-30db @ 1.25GHz	36-Ball, 2.44 x 2.44 (WLCSP)

Ordering Information

Part Numbers	Package Code	Package	Reel Size	# per Reel
PI3WVR648GEAEX	GEA	36-Ball, 2.44 x 2.44 (WLCSP)	7"	3000

Cross Reference

Competitors	Package	Diodes Ordering Part #
ON Semi	FSA646, WLCSP36, 2.43 x 2.43	PI3WVR648GEAEX
TI	TS5MP646, DSBGA, 2.42 x 2.4	PI3WVR648GEAEX