



# New Product Announcement

## PI3WVR14412Q

### 20Gbps, High-Speed, 2:1, Mux/Demux, Automotive-Compliant Signal Switch for DP/HDMI/MIPI/USB Routing

The PI3WVR14412Q is a multi-standard video switch with a wide supply voltage range capability. It supports DisplayPort™ 1.3/1.4/2.1, HDMI™ 1.4/2.0/2.1, MIPI® D-PHY/C-PHY, USB 3.2, and emerging, as well as proprietary, standards.

The PI3WVR14412Q can pass high-speed signals up to 1.2V peak-to-peak differential, with a common-mode voltage from 0 to VDD for transition-minimized differential signaling (TMDS) signals.

The wide supply voltage range allows for DC-coupled multi-standard operation, thereby eliminating AC-coupling capacitors, saving board space, and improving signal integrity for dense PCB designs.

In addition to four high-speed lanes, the PI3WVR14412Q supports multiplexing of auxiliary/DDC sideband signals along with Hot Plug Detection (HPD) signals, thus saving the need for external components.

It is available in the 40-Pin, 3mm x 6mm W-QFN3060-40 (ZLC) package.

*Automotive-compliant - AEC qualified, manufactured in IATF 16949 certified sites supporting PPAP documents.*

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### The DIODES Advantage

The PI3WVR14412Q is a 20Gbps, 2:1, automotive-compliant signal switch for DP/HDMI/MIPI/USB signaling.

- 20Gbps Multi-Standard Video Switch with Wide Supply Voltage Range Capability**  
 Enables high-quality switching/multiplexing of DP 2.1, HDMI 2.1, MIPI D-PHY/C-PHY, USB 3.2, and proprietary standards as well as emerging standards
- Low -2.0dB@20Gbps Insertion Loss, High 12GHz -3dB Bandwidth**  
 Allows for excellent signal integrity parameters
- Multiplexing of AUX/DDC (3GHz -3dB BW) and HPD**  
 Provides a 720Mbps sideband communication channel
- Qualified to AEC-Q100 Grade 2**  
 Supports a wide system temperature range: -40°C to +105°C

### Applications

USB 3.2/HDMI/DP/MIPI Multiplexing in

- Advanced Driver Assistance Systems (ADAS)
- Rear seat entertainment
- Automotive infotainment
- Automotive head units

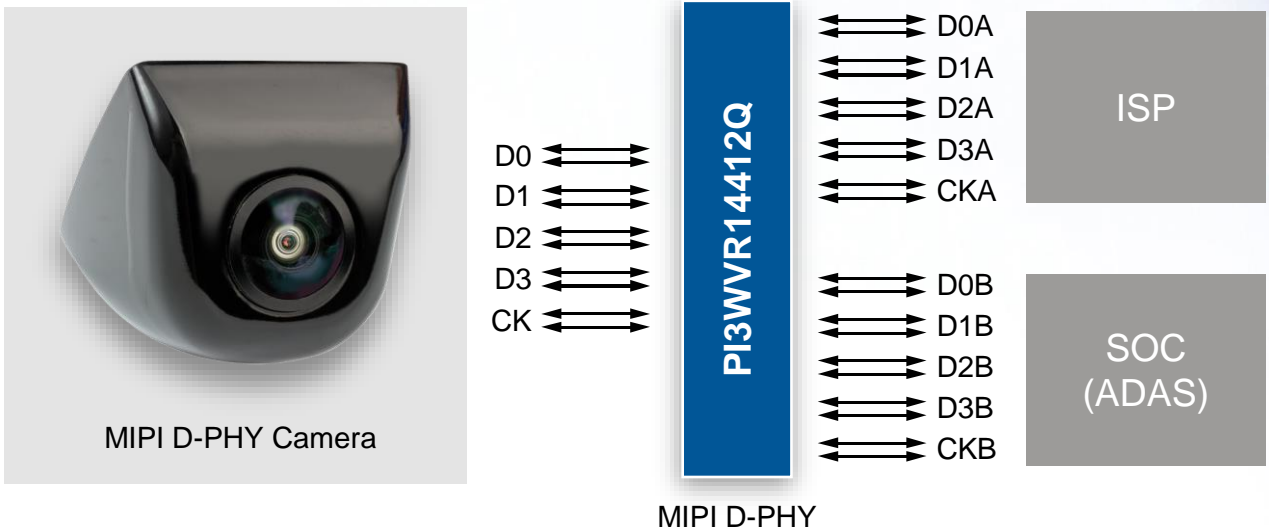


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### Typical Application

#### Advanced Driver Assistance Systems (ADAS)



### Automotive-Compliant High-Speed Media Switch

Part Number	Type	DP/UHBR	MIPI D-PHY/C-PHY	HDMI	Max Data Rate	Lanes	Programming Interface	AUX	DDC	HPD	Temp. Range	Package
					Gbps						°C	
<a href="#">PI3WVR14412Q</a>	Mux/DeMux	2.1/20	1.2	2.1	20	8:4/4:8	Pin Strap	Yes	Yes	Yes	-40 to +105	W-QFN3060-40 (ZLC40)

### Ordering Information

Orderable Part Number	Compliance (Only Automotive Supports PPAP)	Package	Moisture Sensitivity	Packing	
				Quantity	Carrier
<a href="#">PI3WVR14412Q2ZLCEX</a>	<a href="#">Automotive</a>	W-QFN3060-40 (ZLC40)	MSL-1	3,500	Tape & Reel