



13.5Gbps High-Speed Video Switch Supports Latest DP/HDMI Standards

The PI3WVR41310 is a multi-standard, 4-lane, 3:1 Mux/1:3 DeMux video switch with a wide voltage range capability.

It supports DisplayPort™ 2.1 (UHBR13.5), HDMI™ 2.1, as well as emerging and proprietary standards.

The PI3WVR41310 can pass high-speed differential signals up to 1.2V peak-to-peak, with a common-mode voltage from 0 to VDD for TMDS signals.

The wide voltage range allows for DC-coupled multi-standard operations with the elimination of AC-coupling capacitors, which saves board space and improves signal integrity for dense PCB designs.

In addition to four high-speed lanes, the PI3WVR41310 also switches the DDC/AUX and HPD signals using its DDC/AUX and HPD channel Mux/DeMux pins.

The PI3WVR41310 is available in the TQFN(ZL52) package.



The DIODES Advantage

The PI3WVR41310 is fit for applications using current and evolving DP/HDMI standards.

- **13.5Gbps 3:1 Multi-standard Video Switch with Wide Voltage Range Capabilities**
Supports 13.5Gbps DP2.1 and 12Gbps HDMI2.1, as well as emerging and proprietary standards
- **Low Insertion Loss, High Bandwidth**
Maintains -1.8dB@13.5Gbps, -3dB bandwidth: 10GHz
- **Low Crosstalk, Off-Isolation, Bit-to-Bit Skew**
Features crosstalk: -38dB@6.75GHz; off-Isolation: -28dB@6.75GHz; bit-to-bit skew: 5ps@Typ
- **Sideband Signals Integration**
Provides integrated DDC/AUX and HPD switches

Applications

- Commercial displays
- Gaming monitors
- Docking stations
- Video-matrix switches
- Embedded systems

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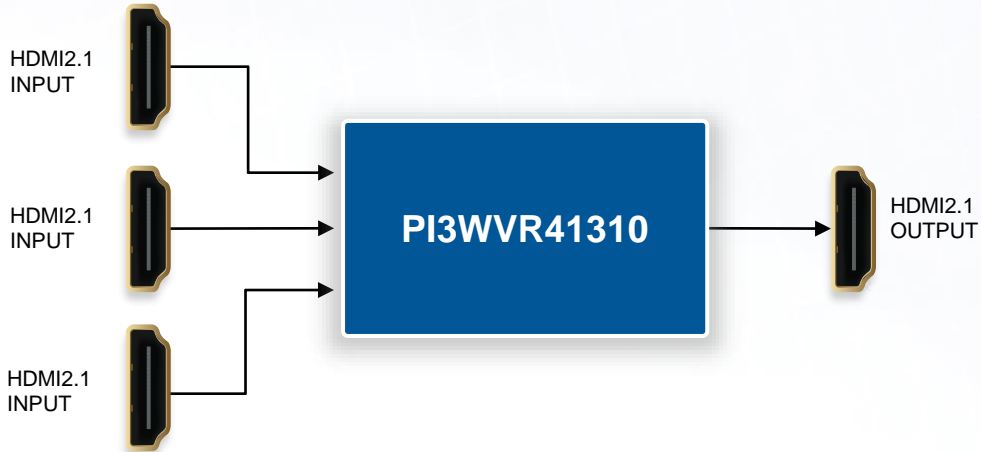
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New Product Announcement

PI3WVR41310

Typical Application



HDMI / DVI / MHL / DisplayPort Switch

Part Number	Type	DP/MIPI Spec	HDMI Spec	Max Data Rate	Lanes	Control	AUX	DDC	HPD	Ambient Temp.	Package
				Gbps						°C	
PI3WVR41310	Mux/DeMux	DP2.1 UHBR13.5	2.1	13.5	12:4/4:12	Pin-strap	Yes	Yes	Yes	-40 to +85	TQFN (ZL52)

Ordering Information

Orderable Part Number	Compliance (Only Automotive Supports PPAP)	Package	Moisture Sensitivity	Packing	
				Quantity	Carrier
PI3WVR41310ZLEX	Standard	TQFN (ZL52)	MSL-1	3,500	13" Tape & Reel