

PI3WVR12612

Wide Voltage Range DisplayPort™ & HDMI Video Switch

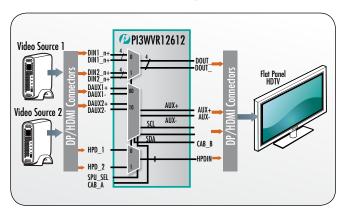
Pericom Semiconductor's PI3WVR12612 is a multi-standard video switch with wide voltage range capability. It supports DisplayPort $^{\text{TM}}$ 1.2, HDMI 1.4, and emerging and proprietary standards.

PI3WVR12612 can pass high-speed signals up to 1.2V peak-to-peak differential with a common-mode voltage from 0 to 3.4V. The wide voltage range allows DC-coupled multistandard operation. Eliminating AC coupling capacitors saves board space and improves signal integrity for dense PCB designs.

In addition to four high-speed lanes, PI3WVR12612 also switches AUX, DDC, and HPD signals.

Application

Routing of DisplayPort and HDMI signals with low signal attenuation between source and sink.



Features

- → 4-lane, 1:2 mux/demux that will support RBR, HBR1, or HBR2
- → 1-channel 1:2 mux/demux for HPD signal
- → Differential switch matrix for DP AUX and HDMI DDC
- → Supports 720 Mbps high-speed DP AUX
- → -1.8 dB Insertion Loss for Dx channels @ 2.7 GHz
- → -3 dB Bandwidth for Dx channels: 4.1 GHz
- → Return loss for Dx channels @ 2.7GHz: -14 dB
- → Low Crosstalk for high speed channels: -28 dB@5.4 Gbps
- → Low Off Isolation for high speed channels: -22dB@5.4 Gbps
- → Low channel-to-channel skew, 35ps max
- → Low Bit-to-Bit Skew, 5ps typ (between '+' and '-' bits)
- → V_{DD} Operating Range: 3.3V +/-10%
- → ESD Tolerance: 2kV HBM
- → Packaging (Pb-free & Green): 50 BGA (NEE)

Block Diagram

