



**THE DATASHEET OF  
PI3WVR12612NEE**



## PI3WVR12612

### Wide Voltage Range DisplayPort™ & HDMI Video Switch

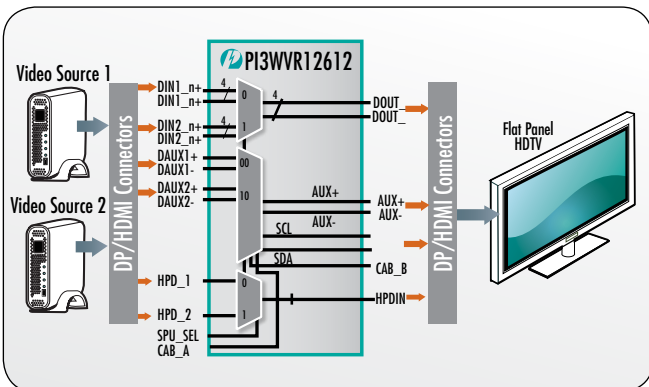
Pericom Semiconductor's PI3WVR12612 is a multi-standard video switch with wide voltage range capability. It supports DisplayPort™ 1.2, HDMI 1.4, and emerging and proprietary standards.

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 multi-standard 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

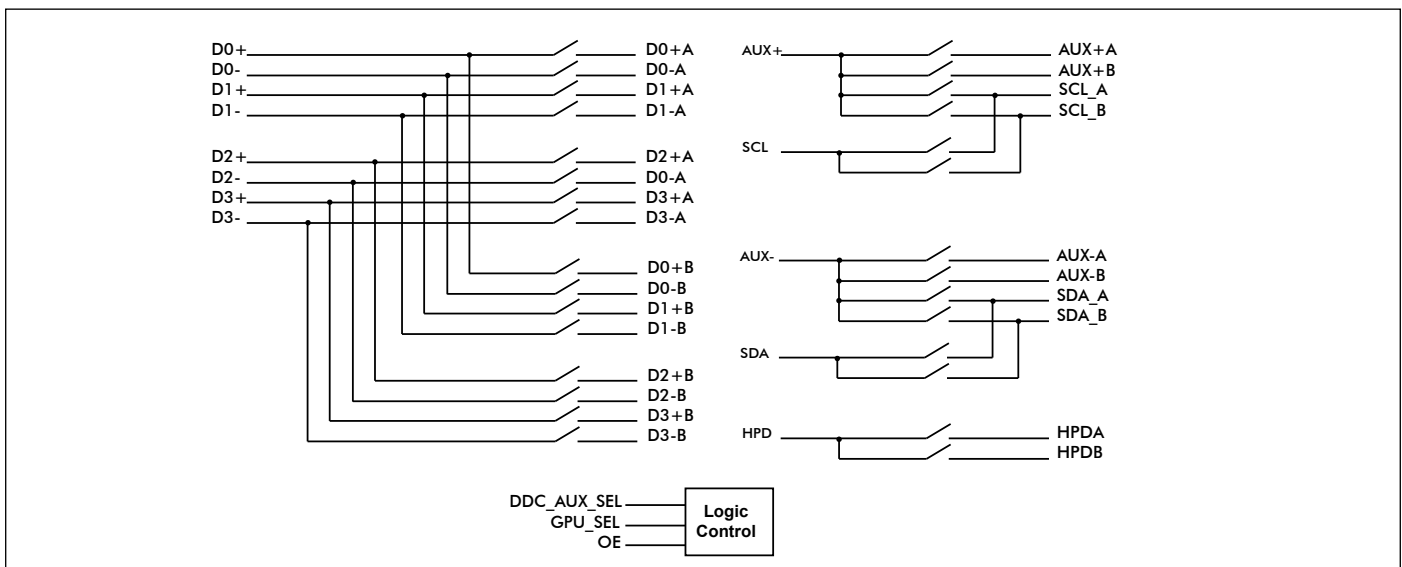
Routing of DisplayPort and HDMI signals with low signal attenuation between source and sink.



#### 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



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