



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



PI3WVR13412

DisplayPort 1.3/1.4, HDMI 2.0 Video Switch

Description

The PI3WVR13412 is a multi-standard video switch with wide voltage range capability. It supports DisplayPort 1.3/1.4, HDMI 2.0, and emerging and proprietary standard.

The PI3WVR13412 can pass high-speed signals up to 1.2 V peak-to-peak differential with a common-mode voltage from 0 to 3.4V for TMDS signal.

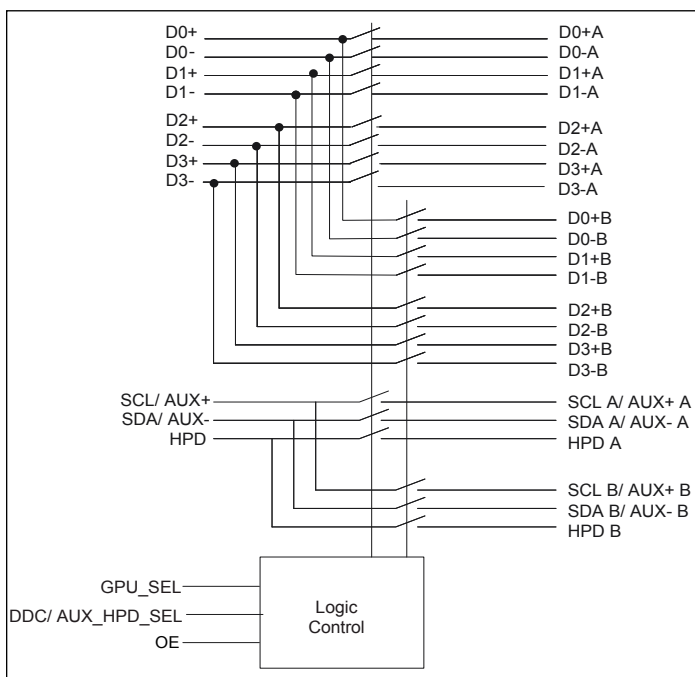
The wide voltage range allow DC-coupled multi-standard operation. Eliminating AC coupling capacitors saves board space and improves signal integrity for dense PCB design.

In addition to four high-speed lanes, PI3WVR13412 also switches the DDC and HPD signals or AUX and HPD signals using the DDC/ AUX and HPD channel mux/demux.

Applications

- Routing of DisplayPort video signals with low signal attenuation between source and sink for PC and monitor.
- Routing of HDMI 2.0 video signals with low signal attenuation between source and sink for 4K2K ultra high definition video display and broadcast video equipment.

Block Diagram



Features

- DisplayPort 1.3/1.4, HDMI 2.0 Electrical standard compatible
- 4-lane, 1:2 and 2:1 switches that support RBR, HBR1, HBR2 and HBR3
- Data rate: 8.1 Gbps for high-speed channels
- Supports DDC with HPD channel mux/demux @ HDMI
- Supports 720 Mbps high-speed DP AUX @ DP
- -1.6 dB Insertion Loss for high-speed channels @ 4.05 GHz
- -3 dB Bandwidth for high-speed channels: 7 GHz
- Return loss for high-speed channels @ 4.05 GHz: -11 dB
- Low Crosstalk for high-speed channels: -35 dB@4.05 GHz
- Low Off Isolation for high-speed channels: -20 dB@4.05 GHz
- Low channel-to-channel skew, 35ps max
- Low Bit-to-Bit Skew, 5ps typ (between '+' and '-' bits)
- VDD Operating Range: 3.3V +/-10%
- ESD Tolerance: 1.5kV HBM
- Packaging (Pb-free & Green): 42 TQFN (ZHE)

Ordering Information

Part Number	Package	Description
PI3WVR13412ZHEX	ZH	42-contact, Very Thin Quad Flat No-Lead (TQFN)

Notes:

1. EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant. All applicable RoHS exemptions applied.
2. See <http://www.diodes.com/quality/lead-free/> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free. Thermal characteristics can be found on the company web site at www.diodes.com/design/support/packaging/
3. E = Pb-free and Green
4. X suffix = Tape/Reel