

ActiveEye™ 3:1 HDMI™ Switch with I²C Control & ARC

Features

- IC control 3:1 HDMI active switch Mux with DC coupled or AC coupled Dual mode DisplayPort signals
- HDMI 1.4 compliant with fast video switch among each ports
- 2.5Gbps data rate for TMDS clock up to 250MHz
- Support up to 36-bits per pixel Deep Color
- TMDS compliance input can be AC coupled video or DC coupled. Output will maintain its DC coupled, current- steering
- Programmable equalizer, Pre-emphasis and amplitude settings to achieve optimized HDMI signal integrity
- Integrated selectable DDC active/ passive switch to connect DDC path
- Idle clock detection function for output squelch
- Programmable TMDS termination control
- TMDS input pull-up 50 Ohm termination, pull-down >120K Ohm resistor when switch is deselected
- Double terminated TMDS output support
- Integrated ESD protection on I/O pins to connector, 8KV contact per IEC61000-4-2, level 3
- 64-LQFP (FB), Pb-free and Green

Description

PI3HDMI336 is an IC configurable active switch using Pericom's new ActiveEye technology to achieve optimized signal integrity for cable or on board transmission. It is HDMI 1.4 / DVI 1.0 standard compatible device and also use for the DisplayPort switching application.

It support both Pin stripping and I²C programmable that MDS input termination settings helps to avoid the compatibility issue caused by non standard HDMI source. This feature minimizes the reflection caused by improper impedance matching and reduces the signal jitter.

PI3HDMI336 provide the optimized trace routing with low BOM cost along with the integrated DDC channel Mux, Hot Plug Detection, cable detection and HDMI 1.4 ARC transmitter.

Applications

- HDMI Switch Box
- STB (Set-top Box)
- Digital TV
- LCD monitors

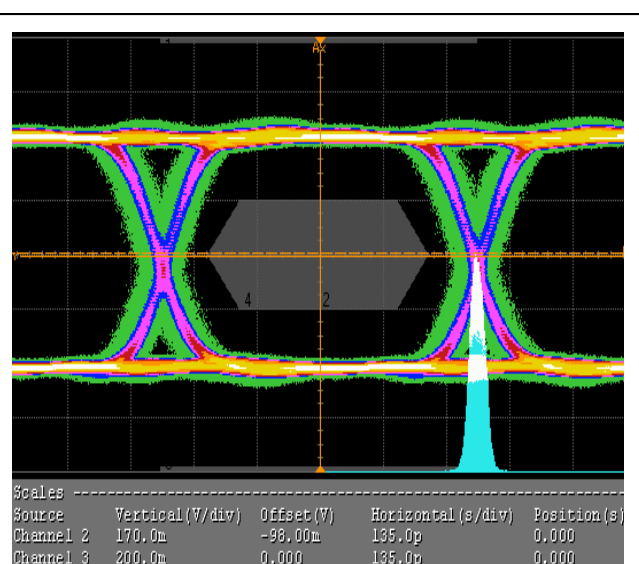
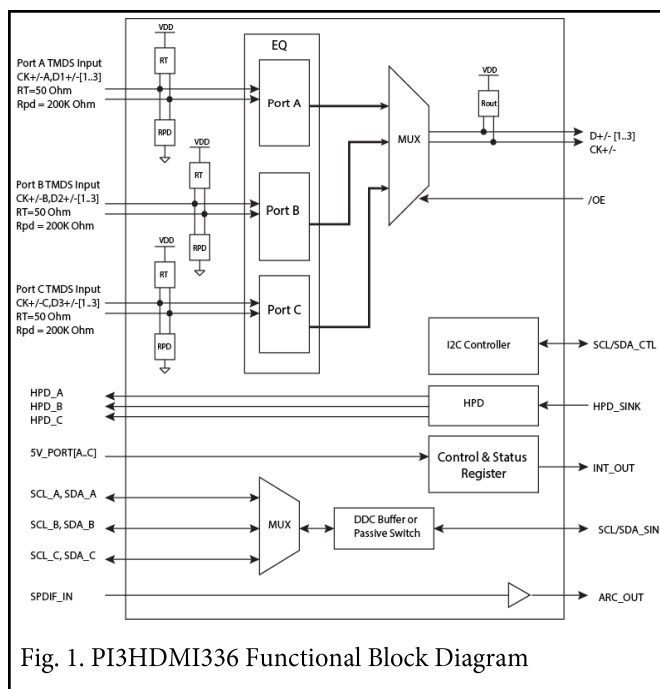


Fig. 2. Eye Diagram at 1920x1080p 8 bit, 16dB EQ, 30m cable

Ordering Information

| Ordering Code | Package Code | Package Description |
|---------------|--------------|---------------------|
| PI3HDMI336FBE | FB | 64-pin LQFP |

Notes:

1. Thermal characteristics can be found on the company web site at www.pericom.com/packaging/
2. “E” = Pb-free and Green, Adding an “X” suffix = Tape/Reel

Related Products

| Part Number | Product Description |
|--------------|--|
| PI3EQXDP1201 | ActiveEye™ DisplayPort 1.2 ReDriver with the built-in AUX listener |
| PI3VDP1430 | ActiveEye™ Dual Mode DisplayPort to HDMI Level Shifter and Re-driver |
| PI3HDMI412AD | ActiveEye™ 1:2 Active HDMI1.4 compliant Splitter/Re-driver |
| PI3HDMI511 | ActiveEye™ 3.4Gbps HDMI1.4 ReDriver for Source-side application |
| PI3HDMI611 | ActiveEye™ 3.4Gbps HDMI1.4 ReDriver for Sink-side application |
| PI3HDMI521 | ActiveEye™ 2:1 3.4Gbps HDMI1.4 Switch/Re-driver with built-in ARC and Fast Switching support for Source-side Application |
| PI3HDMI621 | ActiveEye™ 2:1 3.4Gbps HDMI1.4 Switch/Re-driver with built-in ARC and Fast Switching support for Sink Application |
| PI3VDP3212 | 2-Lane DisplayPort1.2 Compliant Switch |
| PI3VDP12412 | 4-Lane DisplayPort1.2 Compliant Switch |

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