

### Features

- HDMI1.4 compliant ActiveEye™ 2:1 sink-side switch
- Operation up to 3.4Gbps per lane ( 340MHz pixel clock) for 4K x 2K@24Hz ( 297MHz), 3D video format (1080p, 1080i and 720p)
- Support up to 48-bit per pixel Deep Color™
- Integrated Audio Return Channel (ARC) and Rx Sense function
- Fast switching between two HDMI input ports
- Programmable equalizer, Pre-emphasis and amplitude settings to achieve optimized HDMI signal integrity
- Each input can be AC coupled or DC coupled, while the output will maintain TMDS compliance current steering signals
- Rx-sense detector for power-down mode support when the 50 Ohm is not present in the incoming side
- Squelch function to save power when TMDS input clock frequency is less than 10 MHz
- Integrated ESD protection on I/O pins to connector, 8 KV contact per IEC61000-4-2, level 4, 8 KV HBM
- Industrial temperature coverage
- 48-contact LQFP (FB)

### Description

PI3HDMI521 is 2:1 ActiveEye™ switch that supports HDMI 1.4 specification with 3.4Gbps data rate. It supports backward compatibility to the DVI 1.0 standard.

The PC programming function helps to save the extra requirement of GPIO control pins or control chip and provide optimized trace routing and component reduction. The termination setting at TMDS inputs helps to avoid the compatibility issue caused by non standard HDMI sink to determine the connection status of TMDS channel with proper termination voltage setting.

The output termination setting programmable supports double termination to ease the reflection caused by improper impedance matching and jittery signals.

PI3HDMI521 also integrated Audio Return Channel and fast HDMI switching.

### Applications

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

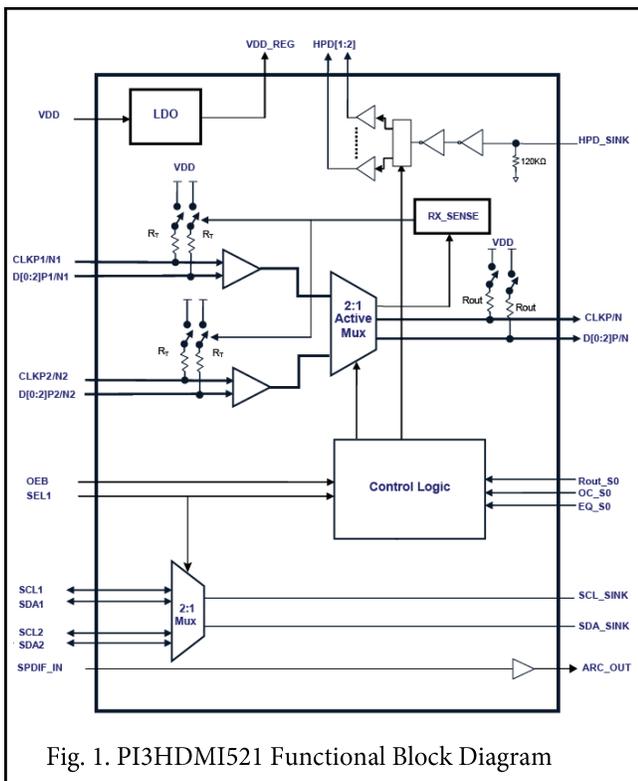


Fig. 1. PI3HDMI521 Functional Block Diagram

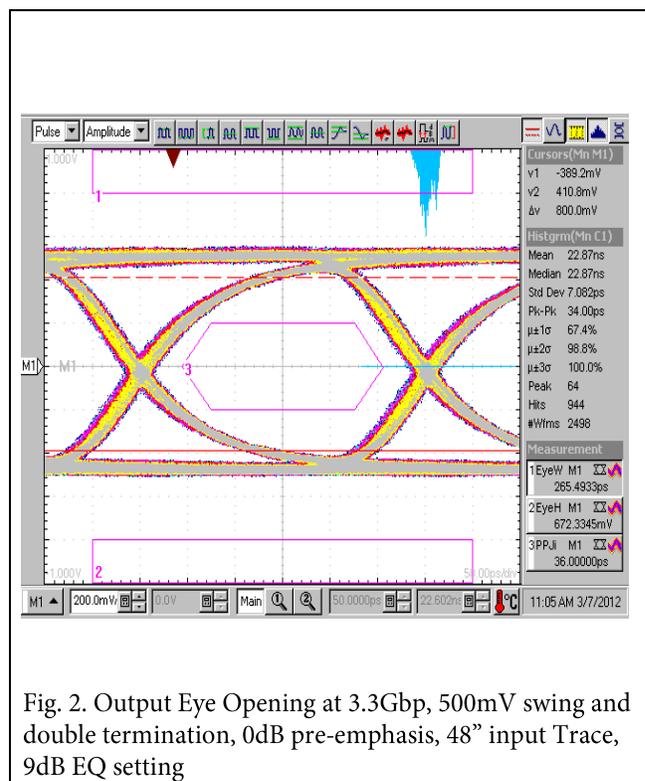


Fig. 2. Output Eye Opening at 3.3Gbp, 500mV swing and double termination, 0dB pre-emphasis, 48” input Trace, 9dB EQ setting

## Ordering Information

Ordering Code	Package Code	Package Description
PI3HDMI621FBE	FB	48-pin LQFP

### Notes:

1. Thermal characteristics can be found on the company web site at [www.pericom.com/packaging/](http://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™ 3.4G HDMI1.4 ReDriver for Source-side application
PI3HDMI611	ActiveEye™ 3.4G HDMI1.4 ReDriver for Sink-side application
PI3HDMI336	ActiveEye™ 3:1 HDMI Switch with I2C control and ARC Transmitter
PI3HDMI521	ActiveEye™ 2:1 3.4Gbps HDMI1.4 Source-side Switch with built-in ARC and Fast Switching
PI3VDP3212	2-Lane DisplayPort1.2 Compliant Switch
PI3VDP12412	4-Lane DisplayPort1.2 Compliant Switch

INFORMATION IN THIS DOCUMENT IS PROVIDED IN CONNECTION WITH PERICOM PRODUCT. NO LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE, TO ANY INTELLECTUAL PROPERTY RIGHTS IS GRANTED BY THIS DOCUMENT. EXCEPT AS PROVIDED IN PERICOM'S TERMS AND CONDITIONS OF SALE FOR SUCH PRODUCTS INCLUDING LIABILITY OR WARRANTIES RELATING TO FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY, OR INFRINGEMENT OF ANY PATENT, COPYRIGHT OR OTHER INTELLECTUAL PROPERTY RIGHT.

Pericom may make changes to specifications and product descriptions at any time, without notice. Designers must not rely on the absence or characteristics of any features or instructions marked “reserved” or “undefined”. Pericom reserves these for future definition and shall have no responsibility whatsoever for conflicts or incompatibilities arising from future changes to them. The products described in this document may contain design defects or errors known as errata which may cause the product to deviate from published specification. Current characterized errata are available on request.

Contact your local Pericom Sales office or your distributor to obtain the latest specifications and before placing your product order.

Copyright 2012 Pericom Corporation. All rights reserved. Pericom and the Pericom logo are trademarks of Pericom Corporation in the U.S. and other countries.