PERICOM®

PI3HDX412BD

HDMI 1.4b 1:2 Splitter/Demux for 3.4Gbps Data Rate with Equalization & Pre-emphasis

Pericom Semiconductor's PI3HDX412BD, active-drive switch solution is targeted for high-resolution video networks that are based on HDMITM/DVI standards, and TMDS signal processing.

The PI3HDX412BD is an active single TMDS channel to two TMDS channel Splitter and DeMux with Hi-Z outputs. The device drives differential signals to multiple video display units.

It provides controllable output swing levels that can be controlled through pin control or I^2C control, depending on the mode select pin. This solution also provides a unique advanced pre-emphasis technique to increase rise and fall times.
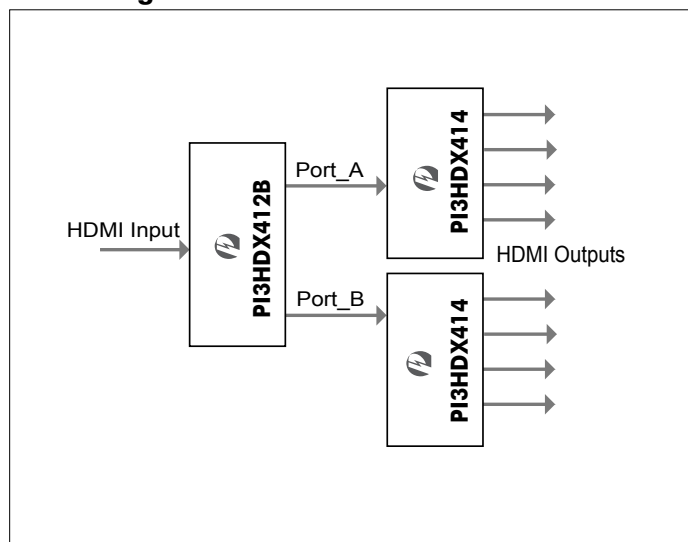
The maximum HDMITM/DVI data rate of 3.4Gbps provides a 1920x1080 @ 60Hz resolution or 4K @30Hz required for 4K HDTV and PC graphics products. Due to its active uni-directional feature, this switch is designed for usage only for the video driver's side. For PC graphics application, the device sits at the driver's side to switch between multiple display units, such as PC LCD monitor, projector, TV, etc.

PI3HDX412BD ensures transmitting high bandwidth video streams from PC graphics source to end display units. It will also provide enhanced robust ESD/EOS protection, which is required by many consumer video networks today.

Features

→ Support up to 3.4Gbps TMDS Serial Link Compliant with HDMI 1.4b requirement

→ HDMI 1-to-2 Splitter or 1-to-2 DeMux with Equal-ization & Pre-emphasis up to 340 MHz Clock

→ AC or DC Coupled Differential Signaling Input

→ Configurable TMDS Output Signal with Port Selection, Pre-emphasis, Voltage Swing, Slew Rate Control

→ Support Squelch Mode with Built-in Clock detector

→ Control Status Register controlled by Pin strap or I^2C mode programming

→ ESD Protection on I/O pins to connector: 8KV Contact per IEC6100-4-2 and 2KV HBM

→ Supply Voltage: 3.3V

→ Industrial Temperature Range: -40°C to 85°C

→ Packaging (Pb-free & Green):
  ◻ 56-contact TQFN (ZB56)

Block Diagram

Application Example