

PCIe8 DVa CLS

PCIe x8 digital video ("A" series) Camera Link simulator



Description

The PCIe8 DVa CLS is a PCIe x8 Camera Link simulator that generates image data by simulating one extended full, full, or medium mode camera, or up to two base-mode cameras. It provides a pixel clock rate of 20 to 85 MHz (in increments of 0.25 MHz) and a text-based configuration script, easily modifiable to match the timing parameters of the camera to be simulated.

The board fits in an 8- or 16-lane PCIe slot. Known image data allows easy debug of interface application code, and system debug when target camera is unavailable.

Image data is sent via DMA from host memory as required by the application. Internal counters can be used as an alternate source of image data. Optional 1 GB DDR2 provides frame buffering.

Line and frame triggering are supported over camera control lines.

C language libraries allow the user to define appropriate responses to UART commands from the interface.

The PCIe8 DVa CLS is shipped as a simulator; however, with a simple firmware reload and power cycle, it converts to a PCIe8 DVa C-Link framegrabber. Once converted, it then operates as specified on the PCIe8 DVa C-Link datasheet.

In framegrabber mode, external triggering and timecode input (IRIG-B) are enabled by the provided Berg or the optional Lemo connector.

Features

- Camera Link simulator fits in an 8- or 16-lane PCIe slot
- Simulates Camera Link digital cameras, base through extended full mode, 1 to 10 taps; supports two base mode outputs at same frequency
- Provides frame storage and buffering via optional 1 GB DDR2
- Supports DMA from host memory for image data
- Allows internal counters to be used as alternate source of image data
- Allows emulation of camera UART commands
- Supports line and frame triggering over camera control lines
- Converts to framegrabber via a simple firmware reload and power cycle
- Optional 7-pin Lemo supports external triggering or IRIG-B timecode input (framegrabber mode only)
- Supports pixel clock rate of 20 to 85 MHz in increments of 0.25 MHz

Applications

Any PCIe application requiring simulated Camera Link output