Overview

The Microtronix ViClaro IV GX Camera Link Development Kit is a versatile video and image processing development platform targeting Camera Link™ interface applications used in commercial and industrial vision systems and products.

The ViClaro IV GX Host Board features a Cyclone IV EP4CGX110 FPGA and a 64-bit DDR2 memory bus. Clocking options allow for connection of three clock sources from a single HSMC header to on-chip PLL enabling the board to support Medium and Full Frame Grabber configurations on a single HSMC connector. Other FPGA development platforms are typically limited to Base Frame Grabber designs due to a limited number of on-chip PLL connections from the HSMC connector.

The Kit can be ordered with a Camera Link Receiver or a Camera Link Transmitter HSMC Daughter Card. Quartus Reference Designs support Frame Grabber and Camera configurations. A HDMI Receiver / Transmitter board is used to input a video source to drive the CL Transmitter or as a means of displaying video received as a Frame Grabber.

The Development Kit is supplied with an evaluation license for Microtronix Camera Link, Avalon Multi-port DDR2 Memory Controller and I2C Master/Slave/PIO Controller IP cores.

Kit Features

- Altera EP4CGX110 Cyclone™ IV FPGA
- 256 MB of 64-bit wide DDR2 memory
- 3 Altera compatible HSMC expansion connectors
- Frame Grabber and Camera interfaces
- Supports Base, Medium & Full configurations
- Camera Link clock rates to 85 MHz. in Cyclone IV
- Evaluation license for Microtronix IP Cores

Target Applications

- Camera Link camera & frame grabber systems
- Industrial vision systems
- 3D Camera Link equipment
- Video test and measurement
ViClaro IV Camera Link Development Kit

Add-on Cards and Ordering Information

HSMC Daughter Cards

**Camera Link Receiver**
- Dual MDR26 Camera Link connectors
- Supports Base, Medium and Full* Camera Link receiver interfaces
- Power over Camera Link™ (PoCL) circuitry
- Quartus reference designs
*Full requires extra PLL available on ViClaro IV GX Host board

**Camera Link Transmitter**
- Dual MDR26 Camera Link connectors
- Supports Base, Medium and Full Camera Link transmitter interfaces
- Quartus reference design

**HDMI 1.1 Receiver/Transmitter**
- AD9880 Analog YPbPr / HDMI 1.1 receiver interface
- AD9889B 1.1 HDMI/DVI transmitter interface
- Quartus video loop-through reference design
- EDID support

Reference Designs

The Quartus Reference Designs are based on the Altera Avalon Video IP and support Camera and Frame Grabber configurations. For more information refer to the ViClaro IV GX Camera Link Development Kit User Manuals.

Kit Contents

- ViClaro IV Host Board & power adapter
- CD with IP Cores and documentation
- Camera Link Receiver and/or Camera Link Transmitter HSMC Daughter Card
- Open Cores Plus evaluation license for:
  - Camera Link IP
  - Avalon Multi-port DDR2 Memory Controller
  - I2C Master/Slave/PIO Controller

Ordering Information

<table>
<thead>
<tr>
<th>Part #</th>
<th>Description</th>
<th>Optional HSMC Daughter Cards</th>
</tr>
</thead>
<tbody>
<tr>
<td>6282-03-01</td>
<td>ViClaro IV GX Camera Link Receiver Dev Kit</td>
<td>6266-01-01 Gig-Ethernet / 1.3 HDMI Transmitter</td>
</tr>
<tr>
<td>6282-04-01</td>
<td>ViClaro IV GX Camera Link Transmitter Dev Kit</td>
<td>6256-00-00 HDMI 1.1 Receiver/Transmitter</td>
</tr>
<tr>
<td>6282-05-01</td>
<td>ViClaro IV GX Camera Link Receiver &amp; Transmitter Dev Kit</td>
<td>6283-01-01 Camera Link Receiver</td>
</tr>
</tbody>
</table>

Optional HSMC Daughter Cards

- 6266-01-01 Gig-Ethernet / 1.3 HDMI Transmitter
- 6256-00-00 HDMI 1.1 Receiver/Transmitter
- 6283-01-01 Camera Link Receiver
- 6287-01-01 Camera Link Transmitter

Product specifications subject to change without notice