

Harrier-F Video Development Kit (VDK)



Video Development Solutions

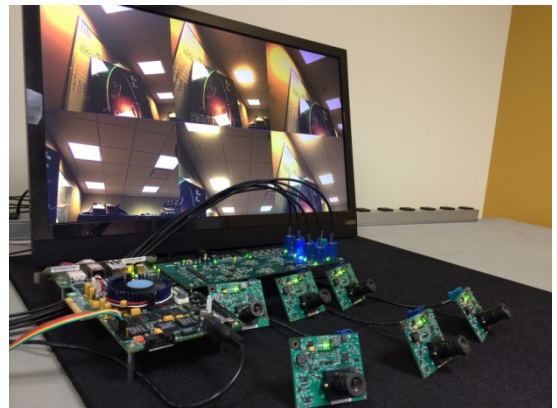
Overview

Genesys Ideation Harrier-F Video Development Kit (VDK) is a multiple camera daughter card solution for the Altera developer’s kits, targeting Advanced Driver Assistance Systems (ADAS) development in the automotive industry. Automotive industry trends suggest a need for multiple cameras in a vehicle to assist the driver with safety related features.

Developed by our design services partner DornerWorks, this solution fills an industry gap for development platforms suitable to meet the needs of managing multiple high definition video streams, mating the capabilities of the Cyclone V SoC FPGA with an array of high-quality imagers. DornerWorks has a history of designing video related products, a wealth of safety critical design experience in multiple industries, and a convenient location for the automotive industry.

Features

- Altera FPGA with Nios II or HPS
- Up to 8 HD imager inputs (1280 x 960 @45 fps or 1280 x 720 @ 60 fps)
- Texas Instruments FPD-Link III deserializer transport interfaces
- FAKRA coaxial interconnect
- Automotive-grade components
- Reference design in programmable logic and software
 - Platform setup
 - Image capture
 - Image display



Benefits

- High throughput video processing
- Supports Advanced Driver Assistance Systems (ADAS)
- Quick startup so you can focus on your design goals
- Easy migration to production-intent design

Use Cases

- Sales demonstration kit
 - Several built-in demonstrations ready to go
 - Shows well-developed reference design
- Engineering development environment
 - Includes Quick Start guide, User Manual and reference applications

Product ID	Price
Harrier-F VDK	\$2950 USD
Single Harrier Daughtercard	\$950 USD
Single Finch Imager	\$250 USD

For additional information and ordering, contact sales@genesysideation.com

Harrier-F VDK Components

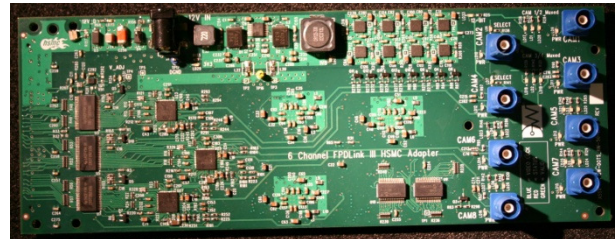
Harrier Daughtercard	See detail below
Finch Imager (8)	See detail below
HDL Configuration	Initialize imagers, clock video data in for each video stream, allow user I/O to control exposure or illumination on the CMOS imager board.
Software	System control and initialization, runs on Nios II microcontroller Initializes imagers (default) to 1280 x 960 @45 fps and 10 bpp depth.
Documentation	Quick Start Guide, User’s Manual

Required Add-ons

Altera Development Kit	Altera FPGA, JTAG debugger and interface, substantial memory for video applications, HSMC daughter card adapter, and SDI video output.
FPD-Link III Cable	Coaxial cable for transmission of the FPD-Link III data for each imager.
Display Monitor	Optional display for the video stream output Connect to HDMI output from Stratix IV Evaluation Board

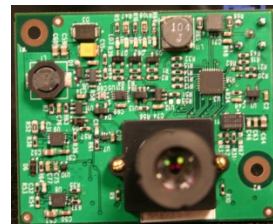
Genesys Ideation Harrier Daughtercard

- Up to 8 video signal inputs on 6 FPD-Link III interfaces
 - 4 inputs multiplexed into 2 FPD-Link III SERDES receivers
- Pixel data routed to HSMC connector and to the FPGA on the Cyclone V board



Genesys Ideation Finch Imager

- Aptina AR0132AT HD imager
- FAKRA coaxial interconnect using SMB connectors
- I2C backchannel interface can support other camera configurations



Related Products

A product roadmap and detailed information about other products in the Video Development Solutions family are available upon request, or at www.genesysideation.com.

If you are in need of custom Hardware, Software, or Custom Logic design services, please contact our parent company, DornerWorks, Ltd. at www.dornerworks.com.

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