What to expect on Vision

sensor to image

Sensor to Image, 1A43

Setup1

GiGE VISION USB3 VISION CoaXPress

- GEV, U3V and CoaXPress HOST and DEVICE IP from S2I
- Comparison based on speed, cable length and cost

News

- ✓ GEV NBase-T with 100MBit-10GBit out of one hardware
- ✓ U3V FPGA based HOST, so that all interface cores in all directions are complete
- ✓ MVDK as universal ALTERA and XILINX development kit

Setup2

GiGE VISION XILINX ALL PROGRAMMABLE™

Embedded image processing with C like FPGA programming

- GEV camera on ZYNQ FPGA with multicast output
- GenAPI PC based control monitor
- ZYNQ based GEV HOST application with XILINX HLS online processing
- Processed image to be outputted on FPGA display system

Fields of Application

- new camera development
- new frame grabber development
- custom CMOS/CCD sensor interface
- upgrade existing products to GEN<i>CAM standard

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ALTERA - Intel PSG, 1C9

ALTERA now part of Intel	**MVDK → Machine Vision Development Kit** • ALTERA modules from Enclustra work out of the box • 2 FMC connectors for best choice of standard FMC interfaces • On-board 1GBit Ethernet from HPS as FPGA, HDMI and USB3 • Reasonable price for complete hardware, reference design and community support • Start with Cyclone5-SOC reference designs for: ✓ GEV DEVICE and HOST ✓ U3V DEVICE with S2I FX3 FMC module ✓ CXP DEVICE and HOST with S2I FMC module ✓ Sony IMX® CMOS camera with S2I FMC module

XILINX, 1C82

XILINX ALL PROGRAMMABLE™	• Standard off the shelf CXP camera • S2I CXP HOST core on KINTEX KC705 • S2I GEV DEVICE core at NBase-T PHY on same KINTEX KC705 at 5GBit/sec • PC with NBase-T NIC • All connected together to demonstrate a setup like described and proposed in WP453

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