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microUSB2

microUSB2 CAMextension

Optimized high data transfer over **USB 2 interface**

Easy connection to host PC without power supply

Flexible hardware and software concept

Interface to **VHDL programming**

Extensible on a **frame grabber**



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Benchmarks

- assured bandwidth of 48 MByte/sec. isochronous data transfer
- core generator to create hardware applets
- VHDL interface to implement customized programs (by merging a custom netlist and microUSB2 netlist)
- connectivity to C++ based FPGA hardware programming tool



Technical feature

Hardware feature

- embedded data and vision preprocessor
- Xilinx Spartan XC2S 200E - FPGA processor
- USB 2 interface
- 66 freely configurable digital inputs/outputs
- 2 clocks
- 3 status LED
- 2 programmable LED
- no external power supply necessary

General features

- bandwidth up to 48 MBytes/sec.
- image preprocessings implementable
- usage as an embedded data processor
- usage as an embedded frame grabber

- usage as an additional image preprocessor
- adaptation to customized hardware and customized applications

Customized applets

- creation by integrated core generator
- creation by VHDL
- creation by C++ based FPGA hardware programming tool

Software features

- software development kit (SDK)
- hardware self test tool
- documentation and applet examples

Supported OS

- Windows 2000
- Windows XP

microUSB2 CAMextension

Hardware feature

- **CAMextension** combines microUSB2 and a frame grabber daughterboard
- miniaturized stand-alone frame grabber for mobile, embedded and industrial applications.
- operation as one-channel frame grabber up to 48 MBytes/sec.
- supports CameraLink and LVDS cameras.
- frame grabber with real time image preprocessing capability.



Camera interfaces

- 1 x CameraLink BASE configuration
- 1 x LVDS 16-bit
- trigger interface with 2 x input, 4 x output, 1 x LVDS trigger out
- additional power supply

Software features

- software development kit (SDK)
- microDisplay
- hardware diagnostic tool
- documentation and examples

Availability

- Q1 / 2004

microUSB2 CAMextension		
	CameraLink	LVDS
camera support		
camera clock	66 MHz	66 MHz
format	BASE	16 bit
trigger	2 / 4 IOs	LVDS trg out
serial comm.	CL cable	
performance		
resolution	2k * 2k	2k * 2k
transfer rate	48 MBytes/s	48 MBytes/s

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