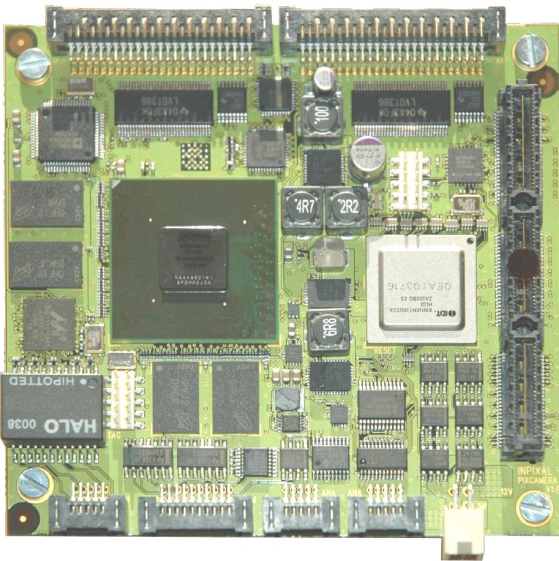


PixBoard

PC/104-Express FPGA based video platform (video acquisition, video display, PCIe, Gbit Ethernet)



HIGHLY INTEGRATED VIDEO PLATFORM

On a single board you can acquire HD video, fast process it and handle the display. This all-in-one solution benefits also from the powerful reprogrammability of the FPGA

HIGH-SPEED DATA INTERFACE

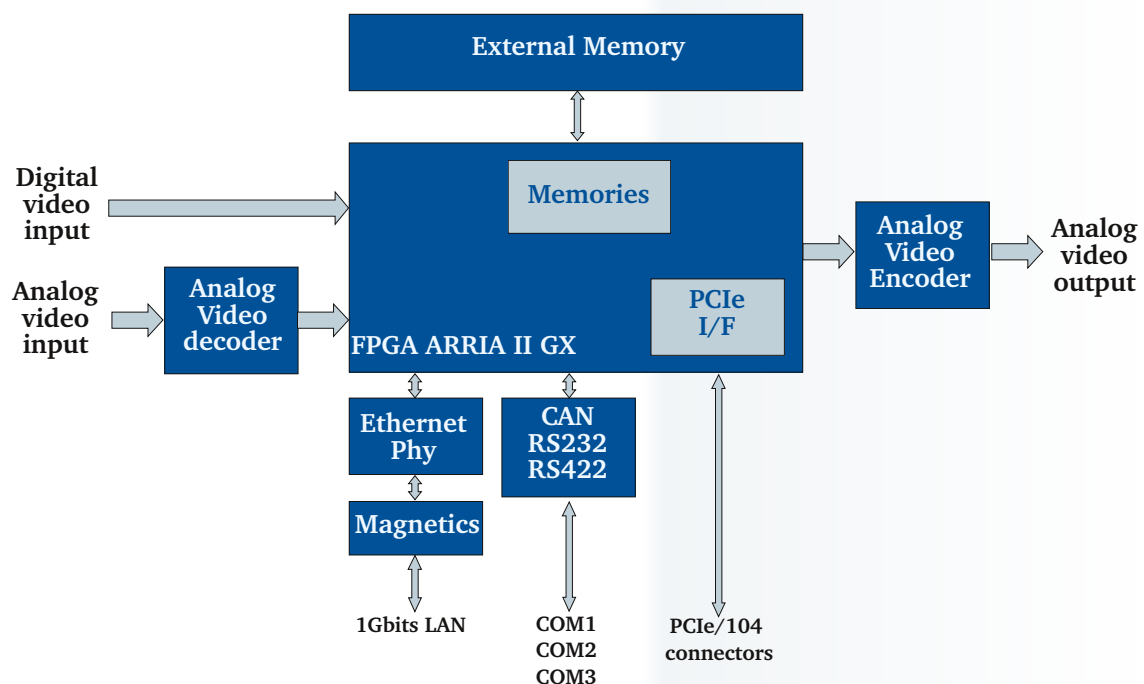
Thanks to PCI-e and Gbit ethernet interfaces Pixboard allows high speed data transfer from and to the board

SCALABLE AND POWERFUL SOLUTION

Possibility to stack several boards together on PCIe/104 connector for high end applications

- FPGA Altera Arria II GX
EP2AGX65DF29I5N
or EP2AGX125EF29I5N
- On Board Memory
SDRAM/DDR2 : 256 or 128 MB
FLASH : 64 KB
- Communication interfaces
RS232, RS422, CAN
Ethernet : 10/100/1000 Mbps
PCIexpress
- Video interfaces
Analog video output
1 analog and 1 digital video input
or 2 digital video input
- PC/104 format
96x90mm
Stackthrough PCIe/104
- Industrial Environment

Block Diagram



FPGA SPECIFICATIONS

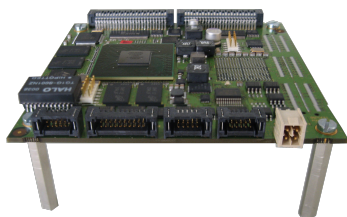
EP2AGX65DF29I5N	65K LE (Altera Logic Element) 448 embedded multipliers 5.3 Mbits of embedded memory PCI express Hard IP block Industrial Grade
EP2AGX125EF29I5N	125K LE (Altera Logic Element) 576 embedded multipliers 8.1 Mbits of embedded memory PCI express Hard IP block Industrial Grade

VIDEO ACQUISITION

Interfaces	two digital interfaces or one digital and one analog
Digital video Camera Interface	LVDS 12 bits max RAW RGB Compatible with PixCam*
Analog Video input	CVBS or YC or RGB NTSC, PAL and SECAM color standards support 525p/625p component progressive scan support 720p/1080i component HDTV support Digitizes RGB graphics up to 1024 × 768 at 70 Hz (XGA)

VIDEO DISPLAY

Analog Video output	CVBS or YC or YCbCr or RGB NTSC, PAL and SECAM color standards support
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DATA INTERFACES

PCI Express interface	PCI Express compliant to PCIe spec 1.1
Ethernet interface	10/100/1000 Mbps PHY and transfo on board
Communication interfaces	CAN RS232 RS422
Memories	Two or four 64Mbytes SDRAM/DDR2 @ 333Mhz One 64 Mbit Flash

MISCELLANEOUS

JTAG	JTAG CHAIN FPGA programmable via JTAG
Characteristics	Weight : 100 g Dimension : 96 x 90 mm Temperature : -40 + 85 °C Alimentation : 5V and 12V

ORDERING INFORMATION

PixBoard-125-P-2G	FPGA EP2AGX125EF29I5N 2Gbit of DDR PCI-e
PixBoard-65-P-2G	FPGA EP2AGX65DF29I5N 2 Gbit of DDR PCI-e
PixBoard-65-1G	FPGA EP2AGX65DF29I5N 1 Gbit of DDR No PCI-e

The All-in-One Board for High-End Video Analytics Applications

* PixCam is a Inpixal Sensor Board based on Aptina MT9V034 video sensor