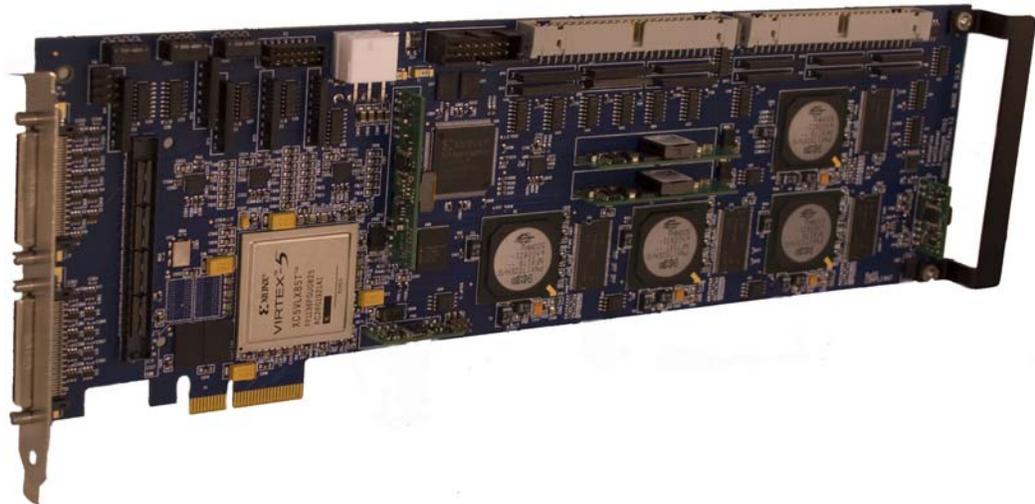# ALACRON

FASTX1703 FRAMEGRABBER

The FastX1703 framegrabber series is for users who anticipate a demand for extreme I/O requirements and/or higher bandwidth, complex image processing and real-time high-speed storage in a cost effective platform. The base FastX1703, is a two thirds length raw form factor PCI board six basic 85 MHz Camera Link Channels or an extended Camera Link camera interface. An auxilliary I/O connector provides a header for adaptation of other high speed interfaces such as LVDS or high speed analog formats such as UXGA or DVI. The front-end data is formatted and preprocessed by a FPGA before being sent to the memory subsection, up to four PNX1702 500 MHz processors with 256MB memory each. Finally, the FastX1703 interfaces to the host computer through a 4xPCIe interface for state-of-the-art data acquisition.
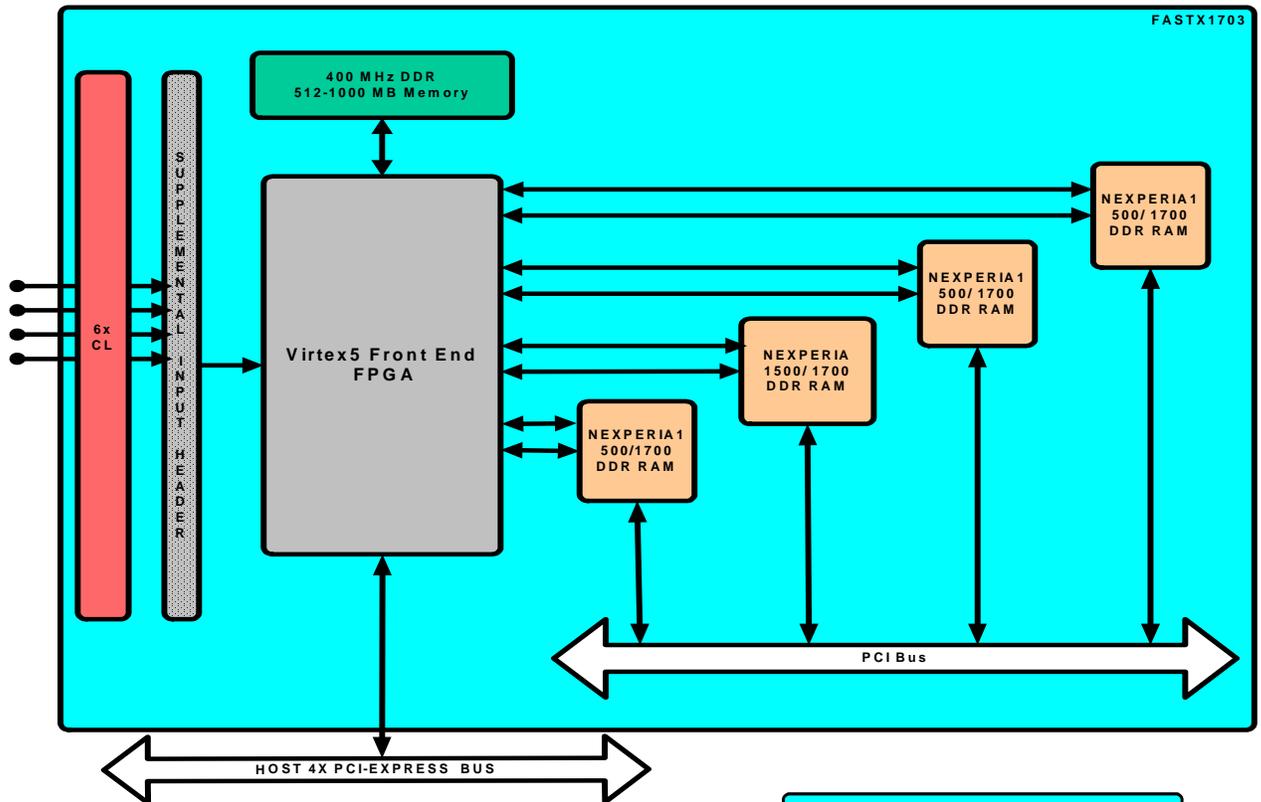

FASTX1703 PCIe KEY FEATURES:

■ Raw PCI form factor board with 512MB dedicated high speed DD2RAM for the front end Virtex 5 FPGA for sustained real-time on-board storage and processing

■ One to four PNX1702 500 MHz processors standard with 200/400MBytes/sec per channel actual transfer VI/VO

■ Collects data from up to six asynchronous Camera (channel) Link channels

■ Programmable FPGA for I/O interface configuration and processing

■ Four lane PCIe bus interface

■ Optional high speed I/O interface for alternative input formats

■ All connectors are legacy so seamless hardware integration into current environment

■ Supported by industry standard firmware development tools, including fully optimized basic data manipulation, data formatting and image processing routines

■ Drivers for Windows™ XP/2K, Linux and Solaris

ALACRON

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FASTX1703 BOARD OVERVIEW

FASTX1703

- 400 MHz DDR 512-1000 MB Memory
- SUPPLEMENTAL INPUT HEADER
- 6x CL
- Virtex5 Front End FPGA
- NEXPERIA1 500/1700 DDR RAM
- NEXPERIA1 500/1700 DDR RAM
- NEXPERIA 1500/1700 DDR RAM
- NEXPERIA1 500/1700 DDR RAM
- PCI Bus
- HOST 4X PCI-EXPRESS BUS

I/O INTERFACE
- **Up to six 85 MHz 28- bit Bidirectional Camera (channel) Link I/O**
- **Optional header for other input/output options including digital LVDS and Analog inputs such as UXGA or DVI**

PCI-e INTERFACE
- **Data width - fout lane PCI-express**
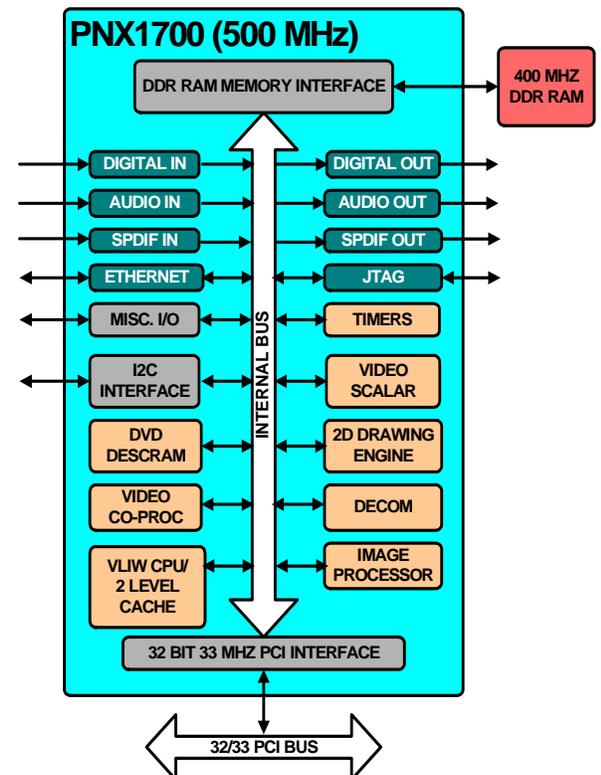- **Peak DMA rate - 1 GB/sec bidirectional.**

PROCESSOR
- **One to four PNX1702 500 MHz VLIW processor 256 MB DD2RAM memory**

CAMERA CONTROL
- **Serial port- Asynch., RS-232 600-19,200 Baud**
- **Camera Link controls (optional)**

MEMORY OPTION
- **512MB DD2RAM memory directly connected to the input FPGA for high-speed input**

PNX1700 (500 MHz)

- DDR RAM MEMORY INTERFACE
- 400 MHZ DDR RAM
- DIGITAL IN / DIGITAL OUT
- AUDIO IN / AUDIO OUT
- SPDIF IN / SPDIF OUT
- ETHERNET / JTAG
- MISC. I/O / TIMERS
- I2C INTERFACE / VIDEO SCALAR
- DVD DESCRAM / 2D DRAWING ENGINE
- VIDEO CO-PROC / DECOM
- VLIW CPU/ 2 LEVEL CACHE / IMAGE PROCESSOR
- INTERNAL BUS
- 32 BIT 33 MHZ PCI INTERFACE
- 32/33 PCI BUS

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