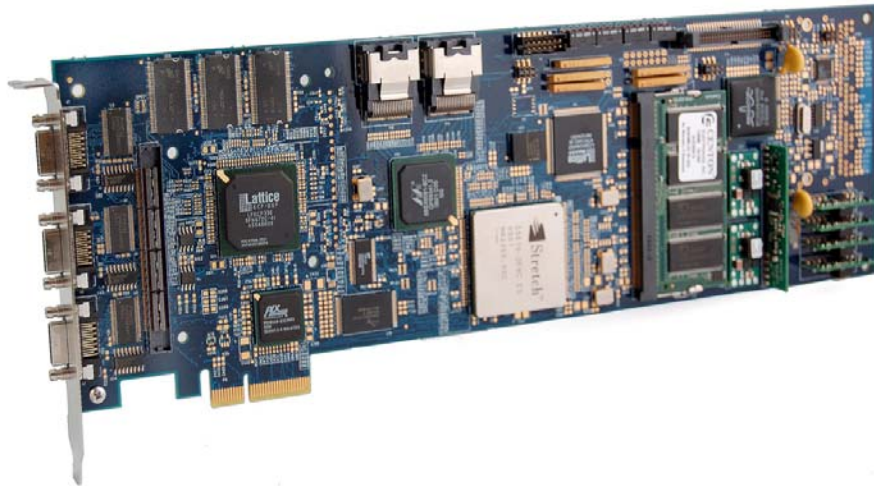# α√ALACRON

FAST-Xe PCIe FRAMEGRABBER

The Fast-Xe PCIe framegrabber series is for users who anticipate a demand for extreme I/O requirements including GigE or higher bandwidth, complex image processing and real-time high-speed storage in a cost effective platform. The base Fast-Xe, is a two thirds length raw form factor PCI board with four GigE ports, three 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. The front-end data is formatted and preprocessed by a FPGA before being sent to the memory subsection, Stretch processor, optional MathStar FPOA, GigE interfaces or other outputs. Finally, the Fast-X interfaces to the host computer through a 4xPCIe interface for state-of-the-art data acquisition. Options include the addition of multiple(8) Serial ATA (SATA) 150 MB/sec interfaces for continuous high-speed data storage without the usual OS or PCI transfer delays.
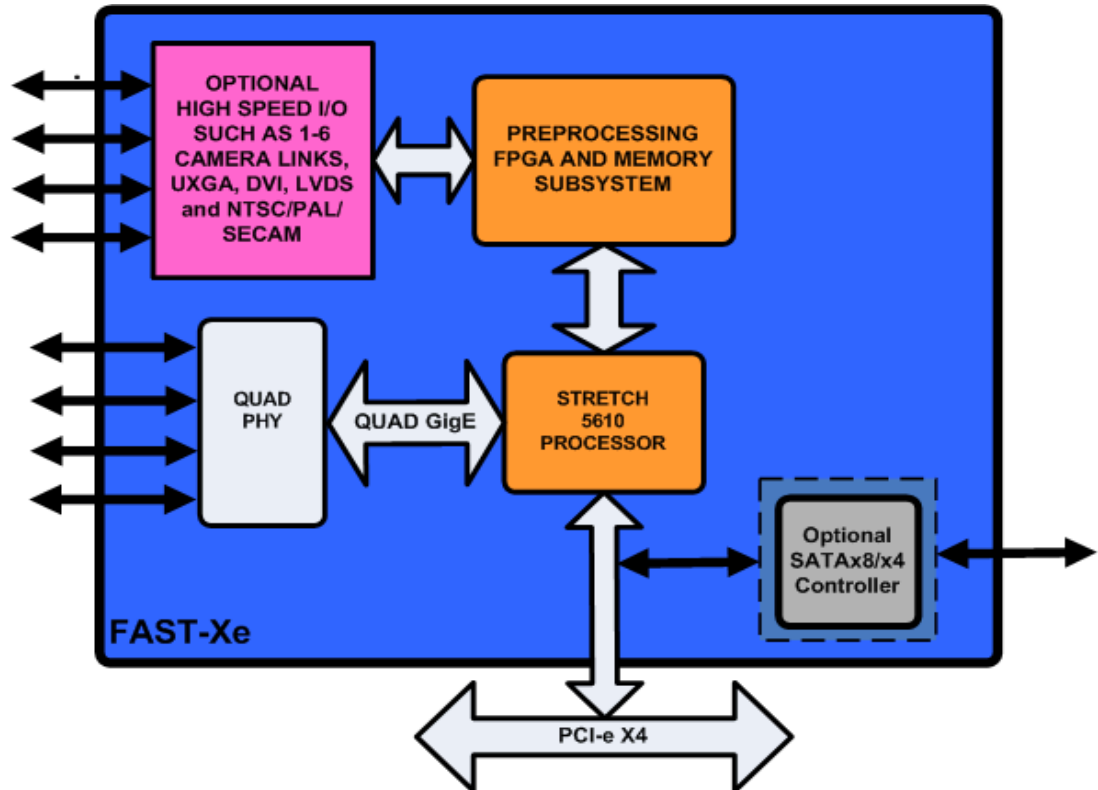

FAST-Xe PCI-e KEY FEATURES:

■ **Raw PCI form factor board with 1-2GB dedicated high speed DDRAM for sustained real-time on-board storage**

■ **STRETCH 5610 processor standard with 4 GigE interfaces for 100MBytes/sec per channel actual transfer I/O**

■ **Collects data from up to six asynchronous Basic Camera (channel) Link channels, four UXGA 205 MHz channels, or up to 52 GP inputs, while providing 12 GP outputs, at up to 166 MHz**

■ **Programmable FPGA for I/O interface configuration and processing**

■ **PCI-Express bus interface**

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

■**Drivers for Windows™ XP/Vista, Linux and Solaris™**

CAMERA Link

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FAST-Xe BOARD OVERVIEW

I/O INTERFACE

- Up to three 85 MHz 28- bit Bidirectional Camera (channel) Link I/O
- Optional header for other input/output options

PCI-e INTERFACE

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

PROCESSOR

- One STRETCH processor with up to 2 GB of PC3200 DDRAM memory

SERIAL ATA I/O OPTION

- Up to eight SATA 150 MB/Sec disk I/O channels for high-speed real-time storage as JBOD or Raid

CAMERA CONTROL

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

MEMORY OPTION

- One to two gigabytes of DDRAM memory directly connected to the input FPGA for high-speed input