ALACRON

FastImage 1303 PCI Board

FastImage 1303 is an Autonomous Imaging System (AIS) that offers a balanced architecture of flexible I/O and processing power with computational and memory bandwidth, typically required by demanding, real-time imaging, vision and DSP applications. FastImage 1303 is based on the Nexperia PNX1302 microprocessor from NXP Semiconductors.

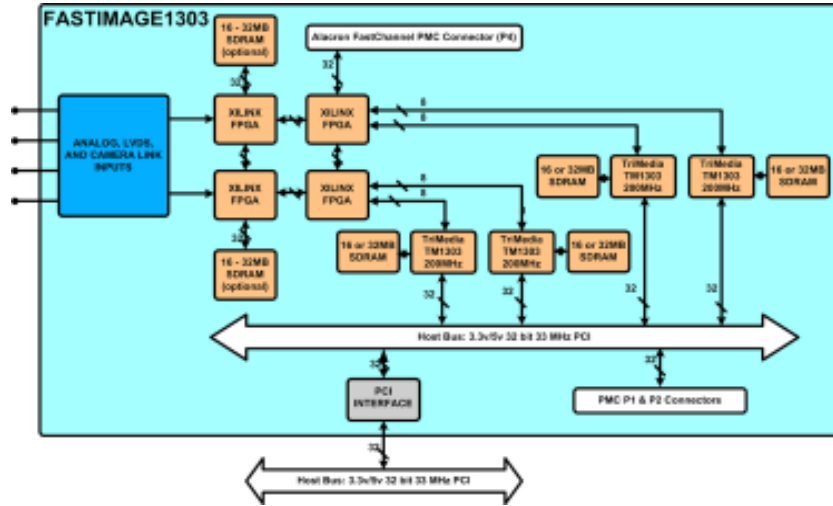## The Future of Image Aquisition and Processing

FastImage 1303 Key Features:

- **Collects data from up to three asynchronous analog cameras**
- **Up to 667-720 MFLOPS / 883-900 MIPS per PNX1302 processor.**
- **Up to four PNX1302 processors**
- **64 MB SDRAM per processor**
- **Three 85 MHZ, 28 bit bi-directional Camera Link ports**
- **Real-time operating system for single and multiple processors, for Windows™ 9X/2K and Solaris™ and Linux**
- **Programmable FPGA's for I/O interface**
- **Input Options**
  - **•Digital, 32 data bits (RS-422, LVDS) with control and clock**
  - **•NTSC/PAL/SECAM**
  - **•Three asynchronous RS-170 inputs or one RGB input**
- **Output Options**
  - **•SVGA**
  - **•RS-170**
  - **•NTSC/PAL**
  - **•Digital, 32 data bits with control and clock**
  - **•32 bidirectional interboard communications links (Fast Channel)**
- **Optional continuous composite NTSC/PAL and SVGA video output**
- **Fast Channel (32 bidirectional interboard communications)**

71 Spit Brook Road, Suite 200, Nashua, NH 03060
T: 603.891.2750 • F: 603.891.2745
E: sales@alacron.com • **www.alacron.com**

FastImage 1303 PCI Board

NTSC/PAL COMP. VIDEO CAP.(4 channels)

■ Input levels 1V peak-to-peak nom., 0.3 to 1.2V peak-to-peak max.

■ Resolution - 8 bits

■ Formats supported - PAL BGHI, PAL N, PAL M, NTSC M, NTSC N, NTSC 4.43, NTSC-Japan, SECAM

ANALOG VIDEO CAPTURE (3 Channels)

■ Input levels 1V peak-to-peak nom,, 2.0V peak-to-peak max., 50mV min. sync level when using composite sync

■ Resolution - 8 bitsx 3 channels

■ Formats supported - line scan and area scan

■ Each input can operate async with and 80 MHz sample rate

DIGITAL VIDEO CAPTURE

■ Common mode input range - -5V to +5V (0 to 2.4V with LVDS option)

■ Input sensitivity - 250mV differential (100mV with LVDS option)

■ Input hysteresis - 50mV typical

■ Max. clock rate - 80MHz

■ Max. input data width - 32 bits

■ Formats supported - ITU-R BT.656 (4:2:2 interlaced color), 8/10-bit mono. variable/line scan, 8/10-bit raw data, 8/10-bit RGB, 16-bit raw at 20 MHz (40 MB/sec.)

■ RS-422, LVDS signaling

CHANNEL LINK (LVDS)

■ Differential output voltage- 250-450 mV

■ Data Rate - >400 Mbs

VIDEO OUTPUT

■ Composite output- NTSC/Pal

■ S-video output - NTSC/PAL (luma shared with composite)

PCI/PMC INTERFACE

■ Clock rate - 33MHz max.

■ Peak DMA rate - 132 MB/sec.

CAMERA CONTROL

■ Serial port - Asynch. RS-232, 600-19,200 Baud

■ Two frame/line start outputs

■ Two exposure control outputs

■ Two master clock outputs programmable in 0.07 Hz steps up to 40 MHz

■ Four general purpose outputs

■ Two external triggers

■ RS-422, LVDS signaling

FAST CHANNEL

■ 80 MHz 32 bit persisitent channels in 4 bit increments for intra- and interboard communication

■ Data traffic does not affect host CPU or PCI bus

DIGITAL INPUT/OUTPUT

■ Output levels- RS-422, LVDS

■ Max. clock rate - 80MHz

■ Max. input data width - 32 bits

■ Formats supported - ITU-R BT.656 (4:2:2 interlaced color),8/16- bit raw data

■ RS-422, LVDS signaling