



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 Acquisition and Processing

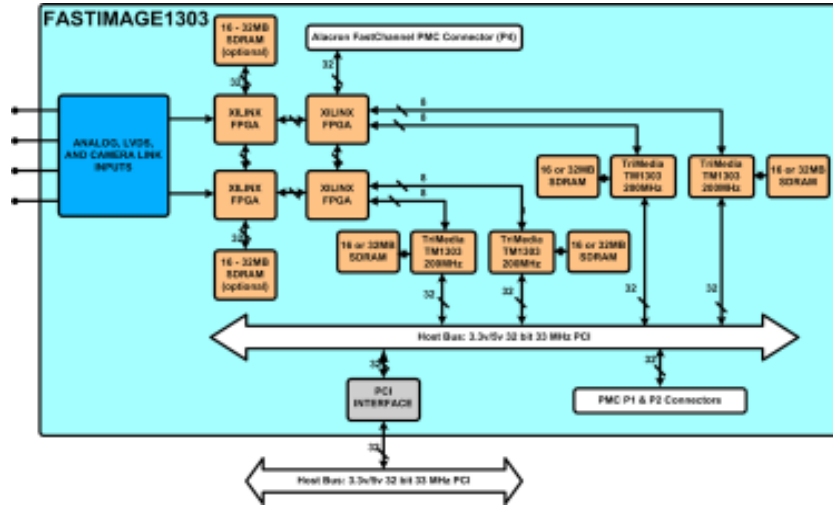
FastImage 1303 Key Features:

- 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)





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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 bits x 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 persistent 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

