

Alacron's newest solution for framegrabbing is FastFrame.\* FastFrame is based on the Philips TriMedia TM-1x00 processor.

### FastFrame Features

- Collects data from up to three asynchronous analog cameras and one NTSC/PAL/SECAM or up to four digital cameras
- Up to 400–532 MFLOPS / 500–665 MIPS per TM-1x00 processor
- Up to two TM-1x00 processors
- 8–32 MB SDRAM per processor
- TriMedia software development environment (SDE) for Windows® 95/NT and Solaris™
- Real-time operating system for single and multiple processors; for Windows 95/NT and Solaris
- Programmable FPGAs for I/O interface configuration
- Input options:
  - ◆ Digital, 32 data bits (RS-422, LVDS, PECL) with control and clock
  - ◆ NTSC/PAL/SECAM
  - ◆ Three asynchronous RS-170 inputs or one RGB input
- Output options
  - ◆ SVGA
  - ◆ RS-170

- ◆ NTSC/PAL
- ◆ Digital, 16 data bits with control and clock
- Optional continuous composite NTSC/PAL and SVGA video output
- Available for PCI computers

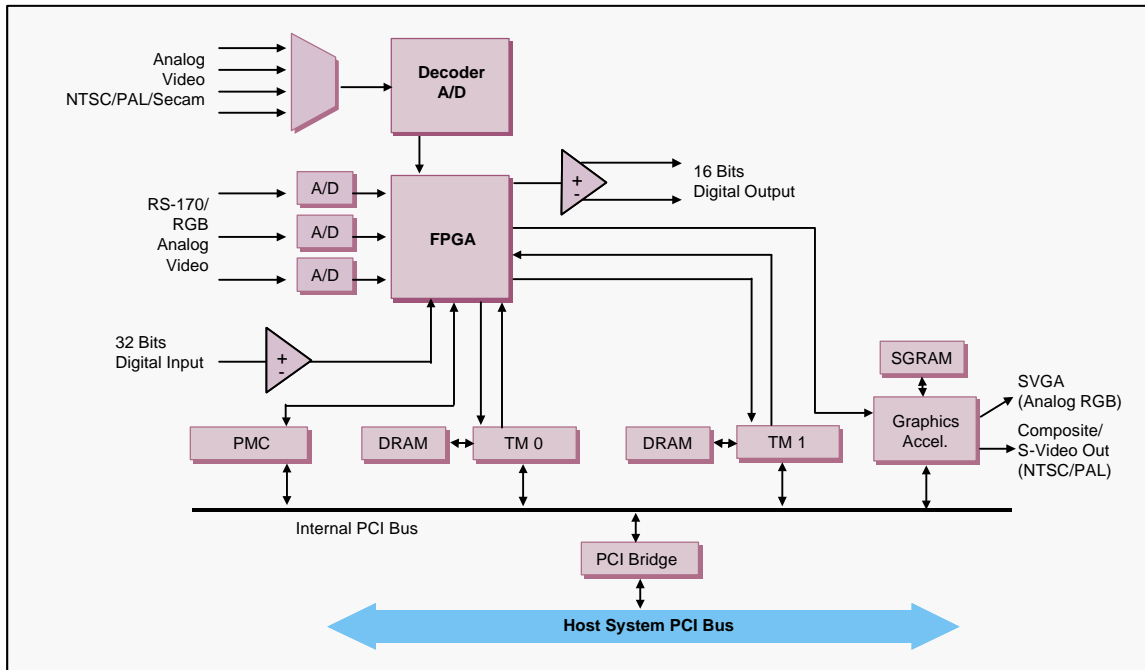
### FastSeries™ Daughter-card Features

One PMC connector on the back of the FastFrame board allows one to increase and expand the computational processing power and I/O capabilities. These PMC connectors are PCI Rev. 2.1 compliant, guaranteeing third-party PMC compatibility.

Alacron has the following daughter-cards available:

- ◆ **Fast4:** A PMC board that expands the FastImage PCI Board with up to eight additional TriMedia processors
- ◆ **FastI/O:** A PMC daughter-card that lets you add extra I/O ports to your FastImage or FastFrame PCI board
- ◆ **FastMem:** A PMC daughter-card with 512 Megabytes of additional memory

\* Alacron's FastSeries™ is comprised of: FastImage™, FastFrame™ (digital and analog framegrabbers), FastDSP™, and three PMC mezzanine cards, FastI/O™, FastMem™, and the Fast4™, offering custom functionality.



## Specifications

### NTSC/PAL Comp. Video Cap.

- Input levels 1V peak-to-peak nom., 0.3 to 1.2V peak-to-peak max.
- Input impedance – 75Ω
- Channel crosstalk – -50 dB 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
- Input Impedance – 75Ω
- Resolution – 8 bits x 3 channels
- Formats supported – line scan and area scan
- Each input can operate asynchronously

### Digital Video Capture

- Common mode input range – 0 to +5V (0 to 2.4V with LVDS option)
- Input sensitivity – 250mV differential (100mV with LVDS option)
- Input hysteresis – 50mV typical
- Max. clock rate – 40 MHz
- 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, PECL signaling

### Digital Video Output

- Output levels – RS-422, LVDS, PECL
- Max. clock rate – 80 MHz
- Max. output data width – 16 bits
- Formats supported – ITU-R BT.656 (4:2:2 interlaced color), 8/16-bit raw data

### PCI and PMC Interface

- Clock rate – 33 MHz max.
- Data width – 32 bits
- Standards compliance – PCI Rev. 2.1

### Video Output

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

### Monitor Output

- Output type – VGA standard analog RGB
- Up to 1280 x 1024 non-interlaced
- Frame rate – up to 72 Hz
- Color depth – up to 24 bits/pixel

## Camera Control

- Serial port – asynchronous RS-232, 600–19,200 Baud
- Two frame/line start outputs
- Two exposure control outputs
- One or two master clock outputs programmable in 0.07 Hz steps up to 40 MHz
- Four general purpose outputs
- Two pixel clock inputs
- Four line/frame valid inputs
- Two external trigger inputs
- Four general purpose inputs
- Power – no camera power provided by card; use an external supply
- RS-422, LVDS, PECL signaling