

# TriMeleon<sup>®</sup> DT1101 PCI

*Video Compression Board*



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## *TriMeleon DT1101*

The TriMeleon DT1101 board is a high performance PCI expansion board for video and security applications. It is appropriate for applications performing general object surveillance and analysis of technical and other processes, just to mention some of its many possibilities.

## *Hardware*

The board integrates the Philips TriMedia<sup>®</sup> Multimedia Processor and 16 Mbytes SDRAM running 120 MHz on both.

It provides four individual video decoders for up to four SVHS cameras. This allows multiplexing of 4 digitized video streams of unsynchronized cameras at the highest possible rate of 16 fps and supports the individual adjustments of camera parameters such as gain, brightness, contrast, hue and saturation for maximum picture quality.

Each video decoder can be programmed to multiplex two FBAS cameras, therefore allowing the connection of up to 8 FBAS cameras.

Four digital sensor inputs and two digital sensor outputs are provided at an RJ45 connector for external device control.

## *Software*

For many standard cases, off-the-shelf software components like Motion-JPEG, H.261 or H.263 video compression are available from DResearch Digital Media Systems.

A hardware abstraction layer library ensures cross compatibility to other TriMedia based boards.

Own application software can be built using a Software Development Kit. Starting with ANSI C, time critical inner loops are spotted and optimized in a compile-profile cycle or accelerated with processor specific commands.

## *Features*

- Philips TriMedia Processor @ 120 MHz
- 16 Mbytes SDRAM @ 120 MHz
- 4 analog video inputs, PAL or NTSC, SVHS or FBAS
- 4 sensor inputs, 2 actuator outputs

## *Applications*

Application fields of the TriMeleon DT1101 board include, among others:

- image processing
- video phone applications
- security applications

## *Performance figures*

- JPEG
  - PAL : 25 frames/sec
  - NTSC : 30 frames/sec
- H.263
  - 15...25 CIF frames/sec

TriMedia

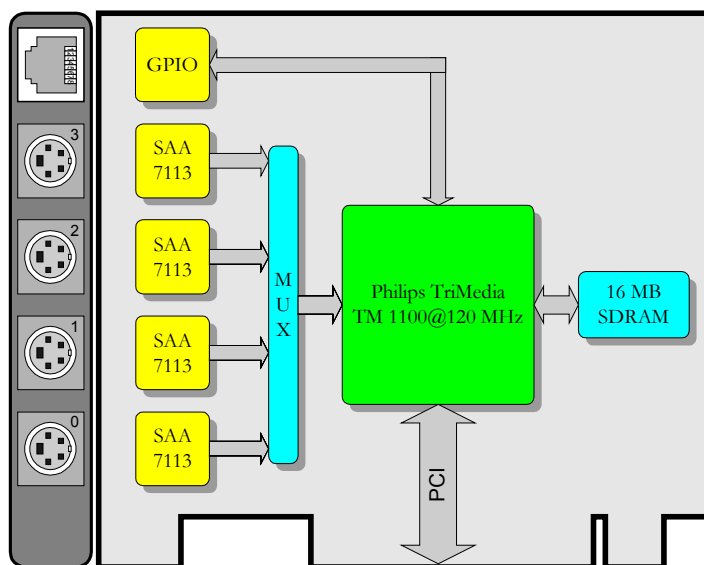
## System Structure

### Video

The TriMeleon DT1101 performs the video digitization and compression. The tremendous CPU performance allows implementation of computational intensive compression algorithms to achieve previously unattained image quality at the highest possible compression rates.

### Sensor Inputs & Actuator Outputs

Four sensor inputs can be used to send control information to the TriMeleon DT1101. Once an input changes, e.g. a hardware sensor detects some motion, an interruption is sent to the TriMedia which in turn performs the necessary actions. Two actuator outputs may be used to control external devices.



### Technical Specification

#### NTSC/PAL SVHS CVBS Video Capture Interface

<b>Input voltage</b>	0.5V .. 1.4V peak to peak
<b>Input impedance</b>	75 Ω
<b>Channel crosstalk</b>	-50 db max.
<b>Resolution</b>	8 Bit
<b>Formats supported</b>	PAL BGHI, PAL N, PAL M, NTSC M, NTSC N, NTSC 4.43, NTSC-Japan, SECAM

<b>PCI</b>	33 MHz, BusMaster, 132 Mbyte/sec, PCI Rev 2.1 compliant
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<b>Power Consumption</b>	max. 2 A @ 5V
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