

# TriMeleon<sup>®</sup> DT1341

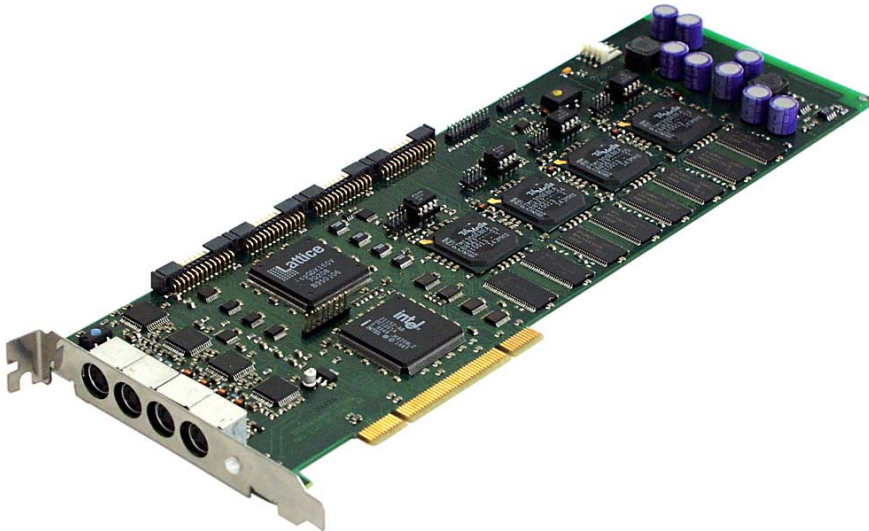
## TriMedia Multiprocessor Board

*Video, Audio, and Telecommunication*

DResearch  
Digital Media Systems GmbH

Otto-Schmirgal-Straße 3 · D-10319 Berlin  
Phone: +49 30 - 515 932 - 0  
Fax: +49 30 - 515 932 - 299  
e-mail [contact@dresearch.de](mailto:contact@dresearch.de)  
WWW <http://www.dresearch.de>

Managing Director Dr. Michael Weber  
County court Berlin-Charlottenburg · HRB-Nr. 54412  
Accounting details:  
Dresdner Bank AG  
Bank code number: 120 800 00  
Account number: 40 472 475 00



The TriMeleon DT1341 Board is a full size PCI high performance board for video applications. It integrates four Philips TriMedia<sup>®</sup> TM1300 Multimedia Processors, with 16 Mbytes of SDRAM each, analog video I/O interfaces including all necessary A/D and D/A converters.

A highly sophisticated video cross-bar allows routing of 4 independent video busses between the processors, the on-board peripherals and external connectors.

### *Fields of Application*

Fields of Application of the TriMeleon DT1341 Board include, among others:

- video compression and decompression, scrambling and descrambling
- stereo imaging and stereo video signal processing
- data encryption / decryption
- computer vision
- 2D and 3D computer graphics
- long-term video recording and playback on TV or VGA

### *Philips TriMedia<sup>®</sup>*

The Philips TriMedia Multimedia Processor (TM-1300 running at 143 MHz) has a VLIW DSP CPU core executing up to 5 parallel instructions in each cycle.

The instruction set includes split ALU and special multimedia instructions. On-chip caches and a 572 Mbytes/s data highway connecting peripheral interfaces with 16 or 32 Mbytes of SDRAM are designed for high volume multimedia data streams. A/D and D/A conversion is integrated on the board using dedicated components.

Thus, the board perfectly connects to commonly used analog multimedia devices like cameras or TV monitors.

### *Software*

For many standard cases, off-the-shelf software components like

- video codecs H.261, H.263+, MJPEG, SpeedWave Wavelet
- software development environment SDE 2.1
- pSOS+m multiprocessor operating system

are available from DResearch Digital Media Systems or Philips.

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

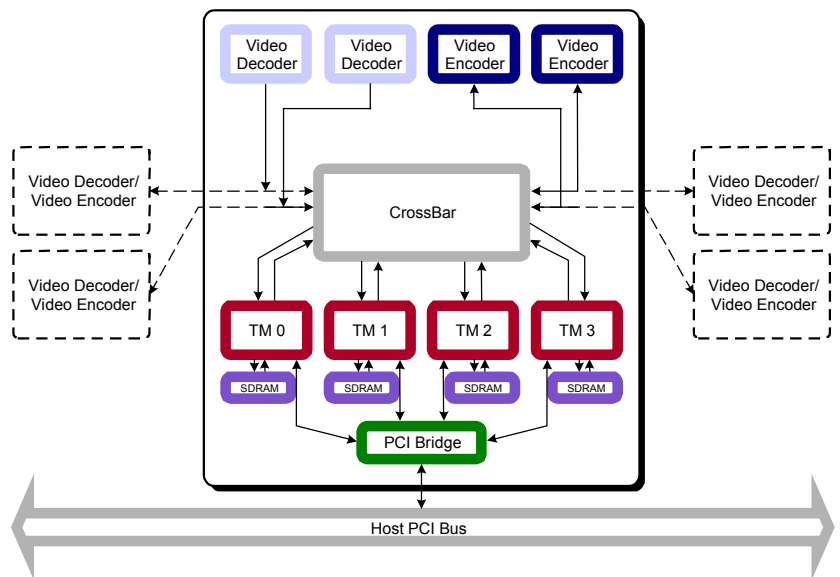
Profit from the experience of our TriMedia experts for a fast and a cost-saving development of your application.



## Technical Specification

- 4 Philips TriMedia Processors TM1300, 143 MHz
- high performance CPU, 3 – 5 GOPS, VLIW SIMD DSPCPU
- PCI 2.1 bus interface
- transparent PCI bridge on-board
- Available memory capacity: 16 Mbytes SDRAM for each processor, 143 MHz, globally accessible in PCI address space
- 2 analog video inputs (CVBS or S-Video, PAL or NTSC) with separate video decoders
- automatic detection of video format, 50 and 60 Hz field frequencies
- 2 analog video outputs (CVBS or S-Video, PAL or NTSC) with separate video encoders
- 4 video expansion connectors
- sophisticated video crossbar
- on-board routed interrupts for fastest interprocessor communication
- JTAG IEEE 1149.1 debugging interfaces
- LED, available on bracket
- Board size: full size PCI 2.1 board
- Power dissipation: <25 Watts

## System Structure



Typical video crossbar configurations include:

- Video Pipeline VI0 → TM0 → TM1 → TM2 → TM3 → VO0
- Decoder Multiplex VI0 → TM0, TM1, TM2, TM3 → PCI
- Encoder Multiplex: PCI → TM0, TM1, TM2, TM3 → VO0
- Stereo VI0 → TM0, TM1 → VO0; VI1 → TM2, TM3 → VO1

For further TriMedia® information on the web, see

TriMedia Technologies Inc.: <http://www.trimedia.com>

Momentum Data Systems Inc.: <http://www.mds.com>

User Group: <http://groups.yahoo.com/group/trimedia/>

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