M503

Real Time MPEG-2 Encoder PMC Mezzanine

- ***MPEG-2 Real Time Encoding***
- ***Variable and Constant Bitrate 1-10 Mbits/sec***
- ***Full D1 PAL/NTSC Composite and S-Video***
- ***VxWorks®, Windows® 98 (*) Drivers***
- ***Program and Transport Stream***
- ***Front Panel or Backplane Inputs***
- ***IEEE P1386.1 Compliant***
- ***Three Ruggedization Levels***

(*) Drivers for Windows®98 are vendor supplied reference drivers

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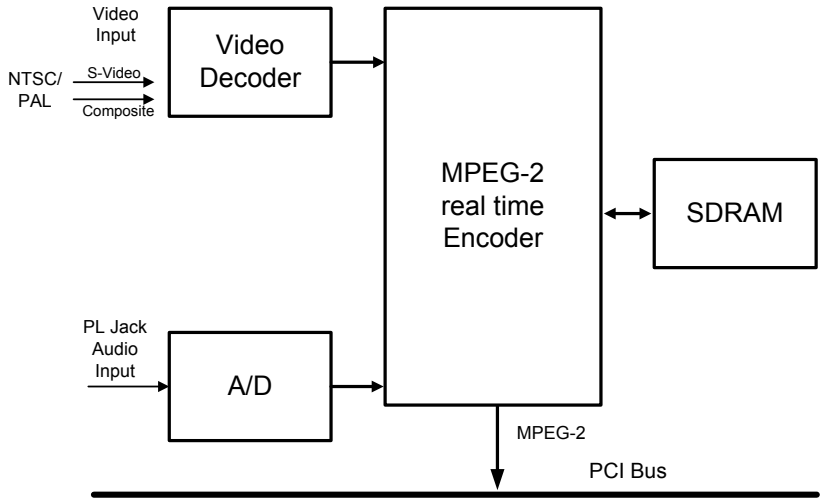
Overview

The M503 is a real time MPEG-2 encoder implemented on a standard PMC mezzanine board. Based on a powerful single chip MPEG-2 video encoder, the M503 encodes NTSC and PAL video into an MPEG-2 Program or transport stream with an IBBP GOP structure at full D1 (CCIR-601, CCIR-656) resolution with stereo MPEG-1, layer 2 audio. This compact video encoder provides outstanding performance, allowing efficient video and audio compression and transmission in the field for commercial and rugged applications. The M503 features 12 Mbyte of onboard RAM.



M503 -Block Diagram

Features

- Real time MPEG-2 full D1 encoding
- Dynamic parameter adjustment
- Pause/Resume encoding
- Variable and constant 1-10 Mbits/s bit rate
- Prefiltering and color format conversion (4:2:2 to 4:2:0)
- Adaptive prediction mode selection
- Adaptive frame/field DCT
- Motion estimation (± 64 horizontal, ± 32 vertical for both forward and backward search)
- Half PEL prediction
- User defined encoding/video parameters
- Audio/video synchronization
- Variable audio sampling rate

MPEG Compliance

- MP@ML 13818-2 video stream
- CCIR-601, CCIR-656 digital video conversion
- PAL and NTSC video formats

Physical Characteristics

- Single wide IEEE P1386.1 compliant PCI mezzanine card (PMC)
- Host PCI bus revision 2.1
- S-video and Composite (RCA) video input
- Stereo audio input
- Front Panel or Backplane based Inputs
- 5W typical power consumption
- Rugged versions available (air cooled or conduction cooled)

PCI Bus Interface

The M503 supports 32-bit PCI bus operation at 33MHz and is fully compliant with the PCI Rev. 2.1 Specification.
The PMC is a universal PMC supporting both +5V and +3.3V PCI signaling levels. It does not utilize the PCI V_I/O power supply.

Drivers

- VxWorks
- MS Windows 98 - vendor supplied reference driversMechanical Format

The M503 PMC is available in two mechanical formats:

- **Air cooled:**
  For Commercial and Rugged air cooled boards. High power components are cooled by a finned heatsink. Outputs of the board are on the front panel.
- **Conduction cooled:**
  For IEEE 1101.2 compliant VME boards. High power components are cooled by a conduction type of heatsink that should be connected to the VME board heatsink / metal frame and the outputs are through the PMC connectors. The external dimensions meet the rugged PMC standard VITA 20-199x and there is no front panel.

Dimensions

- Air cooled: 149 X 74 X 13.5 mm
- Conduction cooled: 143.75 x 74 x 13.5 mm.

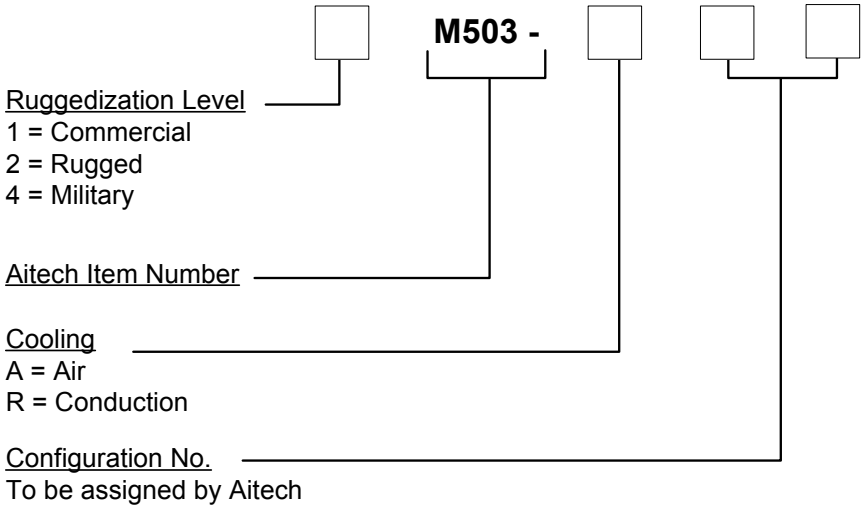
Power Requirements

- Total power consumption (full operation): 7W

Environmental Features

Please refer to Aitech ruggedization datasheet.

Ordering Information for the M503



Example: 4M503-A02

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