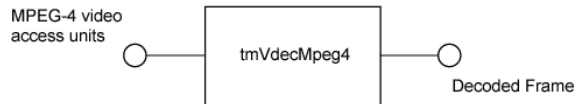


The VdecMpeg4 component decodes bit streams up to MPEG-4 Video Advanced Simple Profile L3 format in real-time. The decoder is optimized to handle bit streams on the 32-bit TriMedia processors.

VdecMpeg4



Description

The VdecMpeg4 component is designed for use in systems that decode MPEG-4 video Advanced Simple Profile format streams. MPEG-4 video Advanced Simple Profile streams are described by ISO/IEC.

It is able to decode Advanced Simple Profile L3 and low bit rate Advanced Simple Profile L4 real-time. Functionally, the component is capable to decode Advanced Simple Profile L5.

The VdecMpeg4 component accepts as input MPEG-4 Advanced Simple Profile L3 elementary video streams. It outputs an YUV video stream.

The library is optimized for the TriMedia processors..

Documentation

A detailed document describing the API and the internal behavior of the component is available.

Features:

- DVP compliant
- Fully compliant with the MPEG-4 Advanced Simple Profile video ISO/IEC 14496-2
- Optimized for the TriMedia processors

VdecMpeg4

Technical Information

Memory Usage

| | |
|---|--|
| Static | 299693 bytes |
| Dynamic (excluding pSOS task stack size) | 109845 bytes – typical CIF movie 146277 bytes – typical half D1 movie |

Note that additional memory is required for buffering input and output data (by means of TSSA packets). The amount is highly application dependent. E.g. for CIF you need four TSSA packets on the output queue with a size of 143360 bytes for the Y buffer and 2 x 45056 bytes for the U and V buffer.

Processor Load

| Stream | Profile & Level | Bitrate (kbit/s) | Size | Framerate (fps) | Average load (MIPS) |
|----------------------|--------------------|------------------|---------|-----------------|---------------------|
| CDR_Dinner_350k-994 | Simple L3 | 320 | 348x240 | 29.97 | 44 |
| CDR_Dinner_800k-997 | Advance Simple L3 | 710 | 348x240 | 29.97 | 57 |
| CDR_Dinner_1300k-996 | Advance Simple L3b | 1130 | 348x240 | 29.97 | 69 |
| against_SIF_24_4 | Advance Simple L3b | 785 | 352x240 | 23.98 | 59 |
| again_half_24_4 | Advance Simple L3b | 1200 | 352x480 | 23.98 | 104 |

Measured using tmosProfile, assert build

Description of the TriMedia board:

| | |
|-----------------------|-------------|
| Type | TM1300 IREF |
| CPU | TM1300 |
| CPU clock | 178.75 |
| Memory | 64 MB |
| SDRAM/CPU clock ratio | 4:5 |

Configuration of the host PC:

| | |
|------------------|---------------------|
| Type | Dell Optiplex GX150 |
| CPU | Pentium III |
| CPU clock | 1000 Mhz |
| Memory | 512 Mb SD RAM |
| Operating system | Windows 2000 |

Other Information

| | |
|-----------------------------|-------------------------------|
| Supported Processors | TM-130x |
| Version Number | 2.5 |
| Built with Compiler Version | V5.7.1 of tcs2.2-dvp0003WinNT |

Related TSSA Software Components

NetworkRead, MP4Read, AdecAac4, AdecCelp4, VpostIcp

Example Programs

ExolMpeg4

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