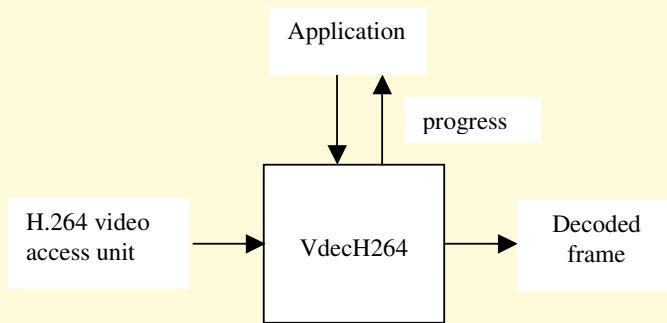


The VdecH264 component decodes Baseline and Main Profile H.264 bit streams upto the level 3.0.

VdecH264



Description

The VdecH264 component is designed for use in systems that decode H.264 video Baseline and Main Profile streams. H.264 video Baseline and Main Profile streams are described by ISO/IEC 14496- Part10.

The component is capable of decoding Level 3.0 streams.

The VdecH264 component accepts as input H.264 Baseline and Main Profile L3.0 bitstream. It outputs an YUV 4:2:0 video stream.

The library is optimized for the TriMedia family of processors.

Features:

- Supports Baseline and Main Profile.
- Supports Levels 3.0 for both Baseline and Main profile.
- ISO/IEC 14496-10 compliant.
- Optimized for TM3260 based processors (PNX1500, PNX8550).
- Fast deblocking algorithm (FaDA).

Documentation:

The user manual of VdecH264 is available.

VdecH264

Technical Information

Memory Usage

Static Memory	500Kb
Dynamic Memory	400Kb + A+ B A: Memory required to store motion vectors of reference frames at 4x4 block level (Stream dependent – 8 Byte per motion vector per direction). B: Memory required to store decoder picture buffers (Stream dependent – (height+64) * (width+64) * 1.5 per frame).

The memory required for TSSA packets is not captured here. That memory is highly application and stream dependent.

Processor Load

Hardware: PNX1500 rev. 1.1 running at 270 MHZ, memory at 200 MHZ

Profile	Level	Dimension	Entropy coding	Average*	Maximum*	Peak-4*	Peak-8*
Baseline	2.0	352x288	CAVLC	105	166	150	135
Baseline	3.0	720x480	CAVLC	420	790	650	490
Main	2.0	352x288	CABAC	130	240	185	170
Main	3.0	720x480	CABAC	800	1200	1060	1030

* Value in MHz

Other Information

Supported processors	TM3260 based processors (PNX1500 and PNX8550)
Compiler version	TCS Version 4.51

Related TriMedia TSSA Software Components

tmParseNALU

Example Programs:

None.

Test Programs:

tstolVdecH264: Tests the functionality of H.264 decoder.

tstolVdecH264Performance: Captures the performance figures of H.264 decoder.

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