

SPIRIT WMA Decoder

Windows Media™ Audio (WMA) is proprietary audio compression format developed by Microsoft Corporation. Four different codecs belong to the Windows Media™ Audio family: WMA Standard (also referred as WMA), WMA Professional, WMA Lossless and WMA Voice. With the active support from Microsoft WMA became the de-facto standard for every device dealing with compressed audio data. Since version 2 the WMA bitstream syntax is officially frozen, that means that the decoder will be able to handle any WMA stream – encoded by the currently existing or any further codec versions.

SPIRIT WMA Decoder is a highly efficient implementation of the WMA STD format, fully compliant to the Windows Media Technology implementation test specification and certified by Microsoft¹. It is designed to add WMA decoding functionality to various portable devices.

Features

- Fully compliant to the Microsoft Windows Media Technology specification
- Bitrates from 5 Kbps to 384 Kbps, CBR and VBR streams
- Sample rates from 8 kHz to 48 kHz
- Sample ASF parser provided in source code
- Low CPU usage and memory footprint
- Code is reentrant, supports multithreading and dynamic memory allocation

Performance Summary

PLATFORM	ARM9E	
Sampling rate, kHz	Peak MIPS	Average MIPS
16	9.9	7.4
22	15.3	9.5
32	16.1	7.2
44	12.6	9.5
48	12.3	10.1

Worst-case MIPS measured along all respective supported bitrates using simulator with 0WS

Resource Requirements

PLATFORM	ARM9E
Average MIPS	9.2
Peak MIPS	11.5
Program Memory, KB	28.4
Constant Memory, KB	22.8
Persistent Memory, KB	9.8
Scratch, KB	16.0
Output buffer, KB	8.0
Stack, KB	1.5

Benefits

- Highly optimized code ideal for resource constrained applications
- Easy integration and fast time to market
- Allows to save several hours of SoC battery life
- Microsoft certified

Key Features

- Low CPU usage
- Small memory footprint
- Simple API

Applications

- Portable media players
- Mobile phones
- Smartphones
- Set-top boxes
- Audio streaming/ Digital radio
- Car electronics

Availability

- ARM Now
- TI OMAP Call
- AudioDE Call
- TI C6xx Call
- MIPS Call

¹ SPIRIT is included into Microsoft Preferred Porting Vendors list http://wmlicense.smdisp.net/ic_approved/

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