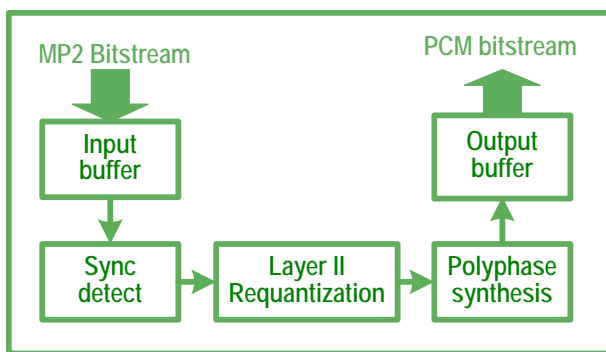**SPIRIT DSP**
Voice & Video Engine Experts

SPIRIT MP2 Codec

MP2, also known as MPEG-1/MPEG-2 Audio Layer 2, is a digital audio coding and lossy compression format standardized by Moving Picture Experts Group (MPEG). MP2 is a sub-band audio codec (time domain), unlike MP3, which is a transform audio codec (frequency domain). MP2 outperforms MP3 on high bit rates and is generally more error-resilient than MP3, which is most important for broadcast applications.

SPIRIT MP2 codec supports MPEG 1, 2 Audio Layer II standards and their low bit rate extension MPEG 2.5. It can be effectively used in such applications as DVD players/recorders, portable audio systems, wireless communications, car audio systems, set-top boxes, Internet appliances, and PDAs.

Features

- Tested on a variety of input bit streams
- High sound quality
- Low MIPS and memory requirements
- TI C6xx version is eXpressDSP compliant. Code is reentrant, supports multithreading and dynamic memory allocation. At the same time allows direct (non-eXpressDSP) interface to enable static memory allocation

Benefits

- Highly optimized code ideal for resource constrained applications
- Easy integration and fast time to market
- High sound quality and wide dynamic range

Key Features

- Low CPU load
- Small memory footprint
- Simple API
- Fully compliant to ISO MPEG standard

Applications

- DVD players/recorders
- Set-top boxes
- Internet appliances
- Portable media players
- Mobile phones
- Car electronics
- Audio streaming/Digital radio

Availability

- TI Cxxx   Now
- TI OMAP   Call
- ARM   Call
- MIPS   Call

Specifications

The MP2 (MPEG Layer II) audio codec supports the ISO/IEC 11172-3 MPEG-1 and ISO/IEC 13818-3 MPEG-2 formats Layer II mono or stereo input streams as well as MPEG-2.5 low bit rate extension. By default, the decoder output is in signed PCM 16-bit stereo format. The decoder also stores 32-bit samples in the output buffer, so the program output can be configured to conform to PCM with any settings.

Resource Requirements

PLATFORM	TI Cxxx	
	Decoder	Encoder
Peak MIPS	8.5	13.5
Program Memory, KB	15.3	15.7
Constant Memory, KB	1.5	2.0
Persistent Memory, KB	7.7	13.0
Scratch, KB	0	0
Stack, KB	0.5	0.5

MIPS are specified for 48 kHz 384 Kbps joint-stereo bitstream, MIPS are measured using simulator with 0-W

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