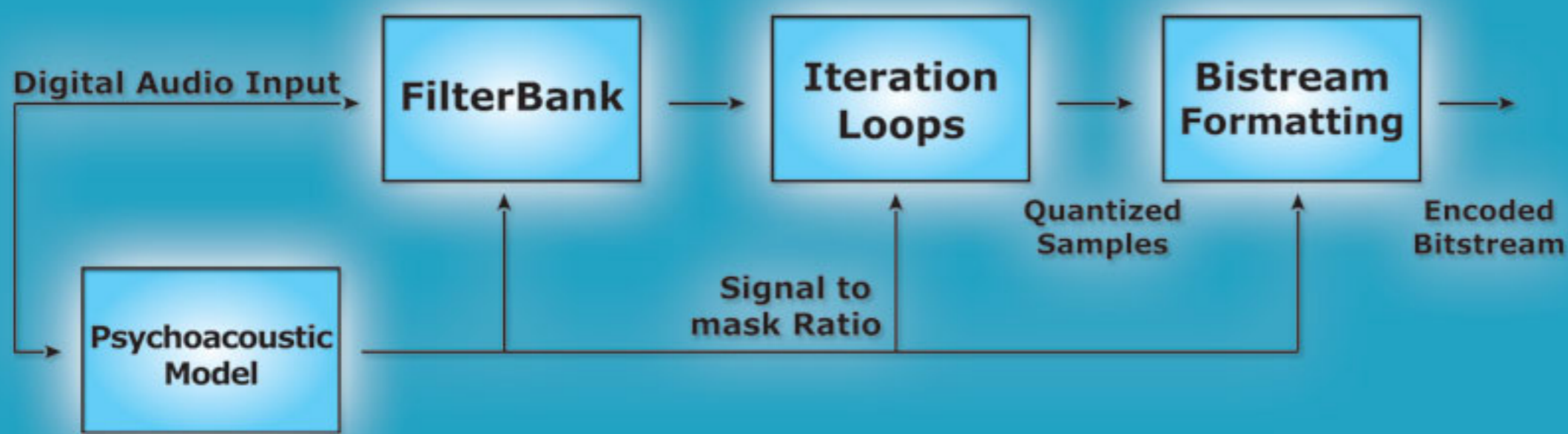


MP3

Audio encoder & decoder for DSP



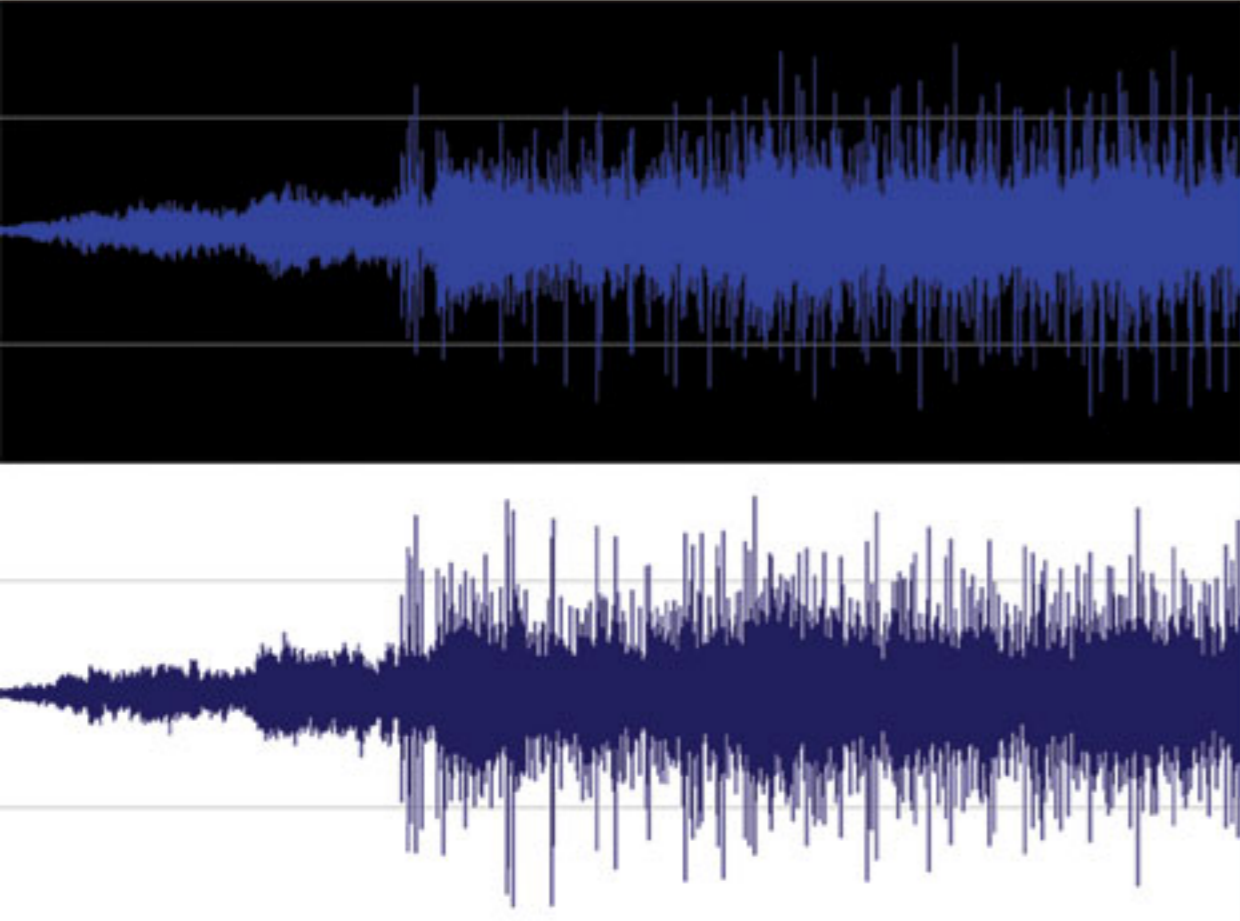
The most powerful member of the MPEG audio coding

FEATURES

- ISO 11172-3: MPEG-1 & MPEG-2 Audio Layer 1+2+3
- ISO 13818-3: MPEG-2 LFE extensions
- MPEG-2.5 Layer 3 extensions

APPLICATIONS

- Personal Audio Systems
- Set Top Boxes
- Automotive Audio Systems
- PDAs / Mobile Terminals
- Internet Appliances



ATEME MP3 (MPEG Audio Layer 3) Encoder and Decoder are low cost solution suitable for high quality and near professional audio (music) applications.

The performance of this solution complies with standard specification as per ISO/IEC 11172-3 (MPEG Audio layer I, II & III).

The solution is based on Texas Instruments TMS320C6000 & TMS320C6400 families.

The implementation is highly and efficiently optimized using mixed C and assembly code to produce a solution that minimizes processing overhead and memory requirements.



KEY FEATURES

- Mono/Dual/Stereo channel bitstreams
- CBR/VBR format supported + free format
- 32 bit fixed point S/W implementation
- Fully compliant to eXpress DSP Algorithm Interface Standard (x-DAIS)

CD CONTENTS

- Library object
- Sample applications
- User's manual



Features

- Decoder supports MPEG-1 Layers 1+2+3, MPEG-2 LFE (Long Frequency Extension to Layer 3) and MPEG-2.5 Layer 3 bistreams
- Encoder supports MPEG-1 / MPEG-2 / MPEG-2.5 (extensions of MPEG-1) Layer 3 Encoding
- Fully compliant with ISO/IEC 11172-4 compliance testing
- Decoding of mono/dual/stereo channel bistreams
- Joint stereo coding for better efficiency
- Supports CBR/VBR + free-format
- Sampling frequencies from 8kHz to 48kHz
- Elaborate defensive coding to make the algorithm more resilient to invalid and corrupt audio streams
- 32 bit fixed point software implementation
- Optimized for low processor requirements
- Fully compliant to eXpress DSP Algorithm Interface Standard

Resources requirements

Algorithm	Platform	MIPS ¹	Code	Tables	Data ²
MP3 Encoder ³	C6400	33	81 kB	40 kB	39 kB
MP3 Fast Encoder ⁴	C6400	TBD	TBD	TBD	TBD
MP3 Decoder	C6400	20	65 kB	17 kB	22 kB
MP3 Encoder ³	C6200	65	55 kB	25 kB	23 kB
MP3 Fast Encoder ⁴	C6200	22	67 kB	15 kB	16 kB
MP3 Decoder	C6200	32	67 kB	17 kB	26 kB

Notes:

¹MIPS data indicates the algorithm requirement in terms of number of instructions to be executed by the processor per second to process one second of real time audio. MIPS given is average MIPS for 48 kHz, 128 kbps (MP3)

²The data memory does not include input and output buffers.

³"MP3 Encoder" meets the Standard Encoder Specification as defined in ISO/IEC standard.

⁴"MP3 Fast Encoder" meets the Limited Accuracy Encoder Specification as defined in the ISO/IEC standard.

Related products

AAC

- AAC encoder for C6400, C6200
- AAC decoder for C6400, C6200

MPEG-2

- MPEG-2 Video elementary Stream Encoder & Decoder (MP@ML) for C6400

MPEG-4

- MPEG-4 Video Encoder & Decoder for C64000

Hardware platforms

- Imaging Evaluation Kits: IEK C6415, IEK C6416
- Digital Media Evaluation Kits: DMEK 6414, DMEK 642

Emulation

- aDICE710

