

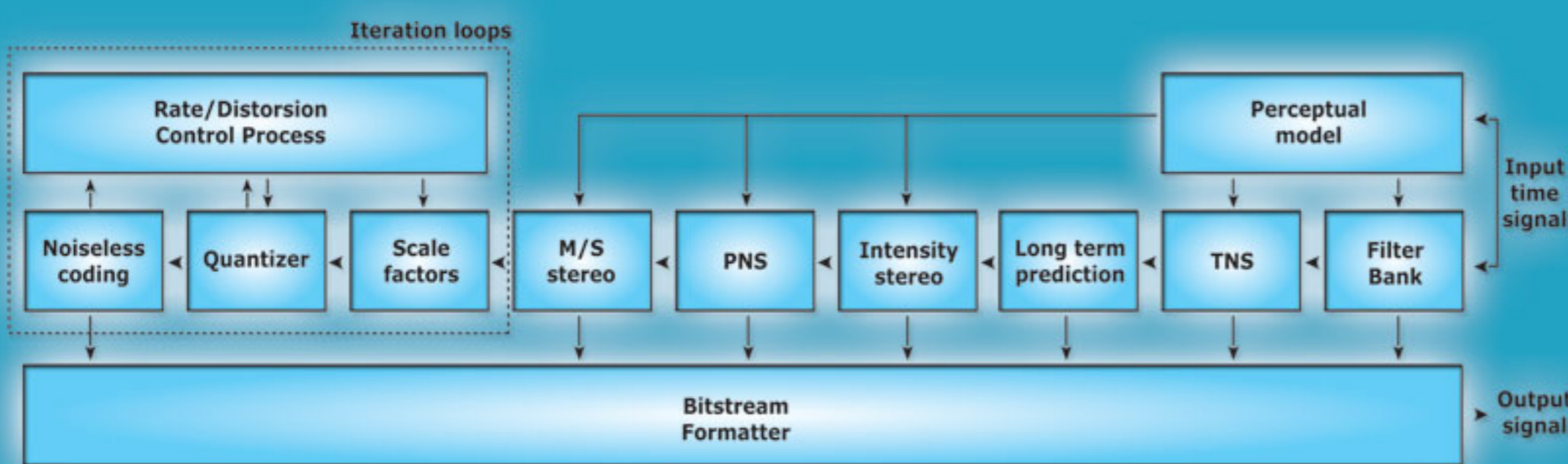
AAC

Audio encoder & decoder for DSP

State-of-the-art
professional
audio encoding

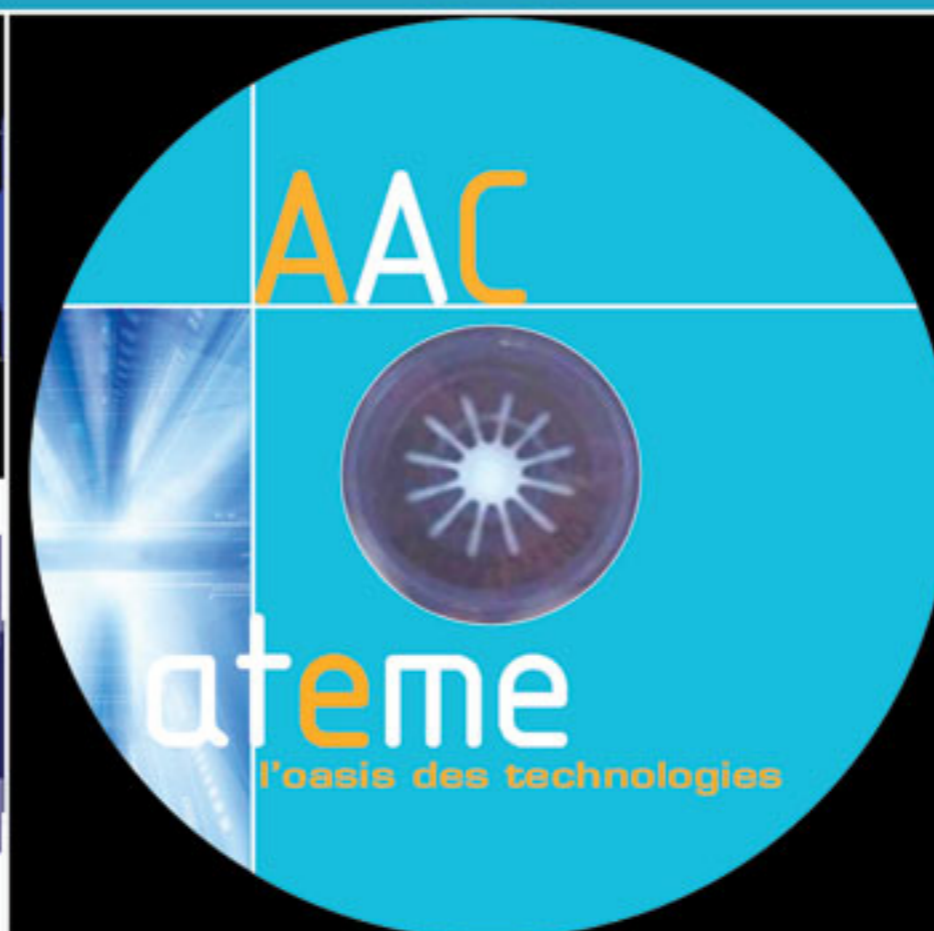
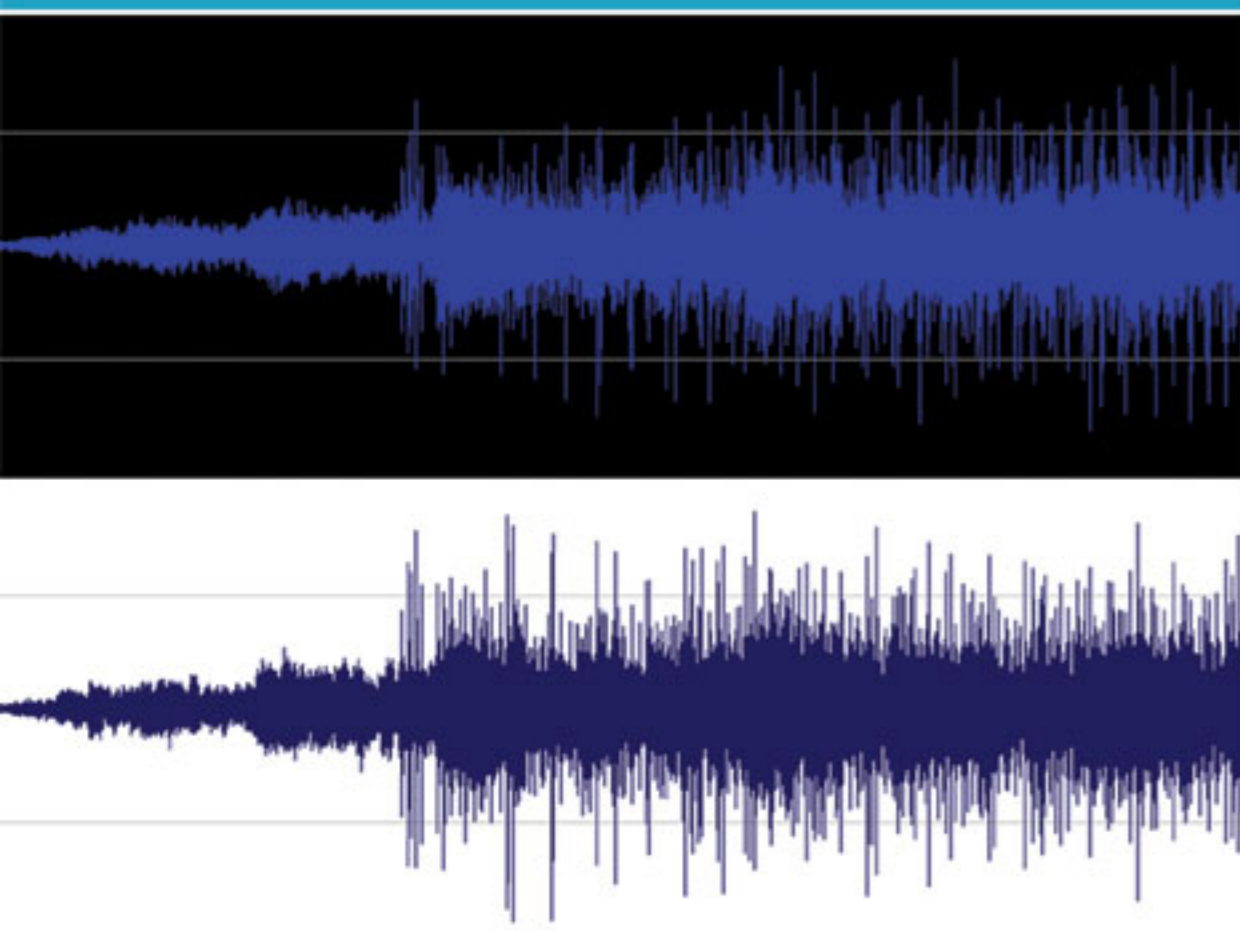
FEATURES

- ISO 13818-7:
MPEG-2 AAC (LC)
- ISO 14496-3:
MPEG-4 AAC (LC & LTP)
- ADIF & ADTS formats



APPLICATIONS

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



ATEME AAC (MPEG Advanced Audio Coding) Encoder and Decoder are low cost solution suitable for high quality and near professional audio applications. Originally targeted for music applications, AAC is also suitable for voice only applications.

The performance of this solution complies with standard specification of both MPEG-2 and MPEG-4 AAC.

The solution is based on Texas Instruments TMS320C64x core architecture.

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
- 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-2 and MPEG-4 AAC LC (Low Complexity) profile
- Encoder supports MPEG-2 and MPEG-4 AAC LC (Low Complexity) and LTP (Long Term Prediction) profiles
- ADIF & ADTS formats Decoder also supports no-header format
- Encoder output bistream is compliant with ISO/IEC 14496-3
- Fully compliant with ISO/IEC 14496-4 compliance testing
- Decoding of mono/dual/stereo channel bistreams
- Joint stereo coding for better efficiency
- Supports CBR/VBR
- 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	MIPS	Program memory	Constant memory	Data memory (per instance)
AAC Encoder	85 (LC) 100 (LTP)	105 kB	83 kB	30 kB (persistent) 70 kB (scratch)
AAC Decoder	17	48 kB	33 kB	4.6 kB (persistent) 14.3 kB (scratch)

Notes:

- The data memory mentioned in the table does not include input and output buffers.
- MIPS 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 in the table is average MIPS for 48 kHz, 256 kbps (AAC).

Related products

MP3

- MP3 encoder for C6400
- MP3 decoder for C6400
- MP3 encoder for 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
- Kompressor AMK4xO

Emulation

- aDICE710