

Ittiam HE-AAC v2 Multichannel Decoder

HE-AAC v2 (Enhanced aacPlus) Multichannel Decoder

AAC is a popular audio coding technique recommended by MPEG committee. SBR and PS are the tools used in combination with the AAC general audio codec resulting in Enhanced aacPlus (also known as HEAAC v2). It provides significant increase in coding gain. In SBR, the high-band, i.e. the high frequency part of the spectrum is replicated using the low-band. The bit-rate is by far below the bit-rate required when using conventional AAC coding. This translates into better quality at lower bit-rates. It can be used in consumer applications like mobile streaming and download, digital terrestrial, cable & satellite television broadcasting and Internet Video on demand service.

Features

- MPEG2 and MPEG4 AAC LC (Low complexity), SBR, PS (Parametric Stereo)
- Supports all sampling frequencies & bit rates for AAC only bit-streams.
- Multi-channel Decoder Features
 - Channels: Upto 8 channels.
 - LFE (Low Frequency Element) Decoding
 - Decoding of Independent switched CCE (Channel Coupling Element)
 - Supports down-mix of multi-channel stream to stereo.
- Supports decoding the following optional Tools: TNS (Temporal Noise Shaping), PNS (Perceptual Noise Shaping), Intensity Stereo & Mid/Side Stereo
- File formats supported: ADIF, ADTS, GA Header
- Compliance:
 - ISO/IEC 13818 - 4, 14496 – 4 (MPEG AAC and PNS Conformance)
 - ISO/IEC 14496 - 4:AMD8 (MPEG SBR Conformance)
 - ISO/IEC 14496 – 4:AMD11 (MPEG PS Conformance)
 - ETSI TS 126 406 V6.3.0 (3GPP PS Conformance)
- Performs Low Power SBR Decoding for stereo bit-stream and performs High Quality SBR Decoding for mono or PS bit-stream
- SBR Level 5
- For SBR bit-streams supports AAC sampling frequency up to 48 kHz & SBR sampling frequency up to 96 kHz.
- SBR Signaling: Implicit, hierarchical explicit and backward compatible explicit.
- Robust against erroneous bit-streams
- Optimized for low footprint & processing power
- Supports a simple C callable API / TI XDMI API
- 16 bit WAV Output format support
- Supports memory allocation based on max number of channels to be decoded
- Skips the unused Independent CCE & DRC elements.

Features not supported:

- More than 8 channels of audio.
- Multichannel streams with PS
- Dependently switched CCE
- DRC

Decoder Validation

The MPEG-4 HEAAC v2 Multichannel decoder implementation has been validated using the latest conformance tool given by MPEG-4.

Notice

Ittiam Systems reserves the right to make changes to its products or discontinue any of its products or offerings without notice. Ittiam warrants the performance of its products to the specifications applicable at the time of sale in accordance with Ittiam's standard warranty.



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