

## Ittiam HE-AAC Decoder

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### HE-AAC (aacPlus) Decoder

AAC is a popular audio coding technique recommended by MPEG committee. SBR is a tool used in combination with the AAC general audio codec resulting in HE-AAC (also known as aacPlus). 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

Features supported:

- MPEG2 and MPEG4 AAC LC (Low complexity), SBR
- Supports all sampling frequencies & bit rates for AAC only bit-streams.
- Channels: Mono/Stereo/Dual-Mono
- Robust against erroneous bit-streams
- Error concealment mechanism
- Tools Supported
  - TNS (Temporal Noise Shaping),
  - PNS (Perceptual Noise Shaping)
  - Intensity Stereo & Mid/Side Stereo
- Bit-streams: ADIF, ADTS, GA Header
- Compliance: ISO/IEC 13818 - 4, 14496 – 4, 14496 - 3:2001/AMD1, 14496 – 4, 14496 - 3:2001/AMD2
- Performs Low Power SBR Decoding
- SBR Levels: Level 2 & 3
- For SBR bit-streams supports AAC sampling frequency upto 24/48 kHz (Level 2/3) & SBR sampling frequency upto 48 kHz.
- SBR Signaling: Implicit, hierarchical explicit and backward compatible explicit.
- Supports a simple C callable API / TI XDML API
- Optimized for low footprint and processing power.
- 16 bit WAV Output format support

Features not supported:

- More than 2 channels of audio.
- SBR Level 4 and 5
- Parametric Stereo Decode
- Channel Coupling
- DRC

## Decoder Validation

The MPEG-4 HE-AAC decoder implementation has been validated using the latest conformance tool given by MPEG-4. The decoder has also been tested for robustness against bitstream errors and quality based on listening tests.

### 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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