

MainConcept AAC SDK

Natural Audio Coding at its best

Advanced Audio Coding (AAC) is the most powerful audio codec available today, representing the “state of the art” in natural audio coding. It features unprecedented device compatibility with virtually all browsers, mobile devices and gaming platforms natively supporting playback of AAC material. The AAC standard continues to evolve, and so does MainConcept’s commitment to engineering the highest quality, best performing audio SDKs.

The MainConcept AAC SDK Packages offer fast and high-quality encoding and decoding of LC, HE v1, v2 and xHE-AAC audio as defined by the ISO and MPEG, making it very easy to add support for this extraordinary audio formats to existing applications.

INTRODUCING XHE-AAC

The latest addition to the family of AAC Audio codecs, xHE-AAC provides high-quality at ultra-low bitrates. It can be used for both VOD and live encoding workflows. Even at 12 kbps, the codec delivers great quality stereo audio material for any type of content. Built-in DRC (dynamic range control) features provide consistent loudness in accordance with MPEG-D requirements. xHE-AAC playback is natively supported on Android and iOS devices and in use by streaming service providers like Netflix.

IDEAL FOR ADAPTIVE STREAMING

Typically, only video bitrates and resolutions are considered for adaptive streaming in MPEG-DASH. However, under difficult network conditions it may be desirable to switch audio channel configuration or bitrate as well. The Fraunhofer AAC Encoder library inside the MainConcept AAC Encoder SDK provides the option to indicate at which point a quality level change may occur, thereby guaranteeing distortion-free, seamless switching.

XHE-AAC: THE NEW STANDARD FOR AUDIO STREAMING

The Fraunhofer IIS team developed the xHE-AAC standard to provide an unprecedented audio experience even under low-bandwidth network conditions (e.g., in public transportation, in the field and in all areas where online connectivity is limited). It has quite quickly become the de facto standard for audio streaming. MainConcept—with the cooperation of the Fraunhofer team— designed this new encoder as an addition to the existing AAC SDK.

OPERATING SYSTEM

- Microsoft Windows 10, Windows 11 (64-bit, x86)
- Apple macOS 10.15 and newer (64-bit x86); macOS 11.x and newer (Apple Silicon)
- Linux Ubuntu 20.04 LTS – 22.04 LTS, Rocky Linux 8.9, CentOS 7.9 (64-bit, x86); Ubuntu 20.04 (64-bit, ARM)

UNPRECEDENTED DEVICE COMPATIBILITY

ULTIMATE COMPATIBILITY

AAC encoding is supported by the vast majority of playback devices

POWERFUL CODECS FOR LIVE AND VOD

LC, HE v1, HE v2, xHE-AAC1 – all from one encoding library

ABR-READY

Restart markers indicate places at which audio can be distortion-free switched from one quality layer to another.

STANDARDIZED

Adopted by 3GPP, DRM, ISMA, Bluetooth SIG, ARIB and more

KEY FEATURES

- ISO/IEC 13818-7 and ISO/IEC 13818-7 encoding and decoding
- ISO/IEC 23003-3 (MPEG-D) audio encoding

OPTIMIZE WITH MAINCONCEPT PROFESSIONAL SERVICES

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PACKAGES

- **AAC ENCODER SDK**
Complete AAC Encoder package to generate streams with AAC LC, AAC HE v1 and AAC-HE v2 audio
- **AAC DECODER SDK**
Complete AAC Decoder package to play back streams with AAC LC, AAC HE v1 and AAC-HE v2 audio
- **XHE-AAC AUDIO ENCODING**
Optional feature enabling live (single pass) and VOD (2-pass), DRC measurement and xHE-AAC (USAC) audio encoding in the Fraunhofer AAC Encoder

ENCODER FEATURES

- Fully compliant with MPEG-2 (ISO/IEC 13818-7) and MPEG-4 (ISO/IEC 14496-3)
- Low Complexity (LC), HE v1 and HE v2 (High Efficiency), as well as xHE-AAC (optional)
- CBR and VBR encoding
- On-demand and live xHE-AAC and AAC encoding workflows
- DRC Loudness control
- Support for 8, 16 and 24-bit PCM input
- Output format: RAW, ADTS, LOAS/LATM ISO/IEC 14496-10 compliant

DECODER FEATURES

- MPEG-2 (ISO/IEC 13818-7) and MPEG-4 (ISO/IEC 14496-3) AAC audio streams
- Main, LC and SBR audio object types.
- Up to 8 audio channels
- LC, Main, LTP, HE v1, HE v2 audio decoding

ABOUT MAINCONCEPT

MainConcept provides audio and video codec solutions that fuel creativity and business across the globe—from professional video production, multimedia, broadcast, digital signage, and gaming to the medical and security verticals. Our software development kits, transcoding applications and plugins deliver the simplicity you need with the customer experience you deserve. Since 1993, MainConcept codecs have been used by hundreds of organizations including Adobe, Autodesk, Corel, Dalet, Encoding.com, Endeavor Streaming, Grass Valley, Intel, MAGIX, Nikon, PlayBox Neo and Soliton. For more information, visit www.mainconcept.com.

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