

FRAUNHOFER INSTITUTE FOR
INTEGRATED CIRCUITS IIS

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THE AAC AUDIO CODEC FAMILY

COMPREHENSIVE AUDIO SOLUTIONS
UNDER A SINGLE LICENSE

Fraunhofer Institute for Integrated Circuits IIS

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The MPEG AAC codec family's efficiency, flexibility and proven unified licensing model make it a great audio solution for a broad range of applications including TV broadcast, audio and video streaming, communications and wireless, low-latency connectivity.

It has been deployed in over 10 billion consumer products globally and provides use-case-optimized features such as high-quality multi-channel audio, ultra low bitrates for all audio content types, low delay, adaptive streaming and metadata support.

Codecs	Features	Applications	Typical bit rates
AAC-LC (AAC Low Complexity)	Excellent audio quality for mono, stereo and multichannel audio (up to 48 channels). Supports audio-specific metadata.	<ul style="list-style-type: none"> – Music and video download (e. g. Apple iTunes) – TV broadcast 	stereo: 128 to 256 kbit/s 5.1 surround: 256 to 320 kbit/s
HE-AAC (High Efficiency AAC) v1 (SBR) & v2 (PS)	High quality mono, stereo and multichannel audio (incl. 7.1 profile) at low bit rates. Supports audio-specific metadata.	<ul style="list-style-type: none"> – Ideal for channels with limited capacity (e. g. in TV & radio broadcast) – De facto standard for streaming (e. g. Google Play, Netflix, Pandora) 	stereo: 32 to 96 kbit/s 5.1 surround: 96 to 256 kbit/s
xHE-AAC (Extended High Efficiency AAC)	Enabling ultra low bitrates for speech, music and mixed content while offering seamless adaptive bitrate switching to higher bitrates. Mandatory loudness and DRC support.	<ul style="list-style-type: none"> – Ideal for radio, music and video streaming, including on mobile networks – Widely deployed for Digital Radio Mondiale 	stereo: 12 to 300 kbit/s range, flawless switching over DASH or HLS
AAC-ELD (Enhanced Low Delay AAC) family	AAC-LD, AAC-ELD and AAC-ELD v2 for Full-HD Voice audio quality at a coding delay as low as 15 ms.	<ul style="list-style-type: none"> – Video conferencing systems – VoIP – Consumer video telephony applications (e. g. Apple FaceTime) – Low delay audio streaming 	mono/stereo: 24 to 128 kbit/s