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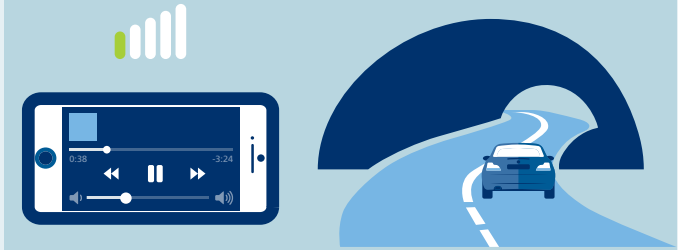
xHE-AAC®

THE AUDIO CODEC OF CHOICE FOR ADAPTIVE STREAMING AND DIGITAL RADIO

xHE-AAC is the latest member of the MPEG AAC audio codec family and has been a mandatory audio codec of Digital Radio Mondiale (DRM) since 2013. It is used by Netflix and natively supported in the latest Apple, Android and Amazon operating systems and products. Fraunhofer's xHE-AAC implementation has recently been licensed to Microsoft.

www.xhe-aac.com

BIT RATE TRANSITION SCENARIO WITH xHE-AAC



Low reception quality – audio stream with 12 kbit/s

Medium reception quality – audio stream with 48 kbit/s

High reception quality – audio stream with 128 kbit/s

xHE-AAC® is a registered trademark of Fraunhofer-Gesellschaft in Germany, the United States, and other countries.

A demonstration of the improved audio quality and new features of xHE-AAC compared to HE-AAC is available on Fraunhofer's informal AAC playback test site at **www.xhe-aac.com/listen**.

xHE-AAC is included in the AAC Patent Licensing Program by VIA Licensing at no extra cost.

xHE-AAC combines speech and audio coding into one unified system and enables consumers to enjoy uninterrupted streaming with all types of content – such as movies, music, audiobooks or podcasts. The codec's usable bit rate range for stereo services spans from 12 kbit/s to 500 kbit/s and allows for seamless switching between those. This bit rate flexibility improves the reliability of streaming services: listeners will enjoy a continuous playback, even under challenging network conditions. The reduced bit demand of xHE-AAC can also help reducing bandwidth costs. These characteristics make xHE-AAC the ideal codec for mixed-content applications with limited transmission capacity, such as mobile audio and video streaming or digital radio.

The mandatory MPEG-D DRC metadata provides loudness and dynamic range control for xHE-AAC to play content at a consistent volume and deliver the best possible user experience in any listening environment and on any device. This enables consumers to better understand dialog, for instance in a movie.

Digital radio broadcasters also benefit from a simplified codec configuration process where all relevant quality parameters are automatically optimized by the encoder, as well the ability to deliver a wider selection of audio programs thanks to xHE-AAC's high coding efficiency.

Fraunhofer IIS has also announced a new web-based test service that developers and manufacturers can use to validate their implementations of the xHE-AAC audio codec for compliance with MPEG standards. The service, which is available at **https://test.xhe-aac.com**, is free to use upon registration with Fraunhofer and will test both encoders and decoders. Fraunhofer licenses the use of its xHE-AAC trademark on a no-charge basis for use with products that successfully pass the test service tests.

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