



# Fraunhofer

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FRAUNHOFER INSTITUTE FOR  
INTEGRATED CIRCUITS IIS

## FRAUNHOFER CINGO®

TRULY IMMERSIVE SOUND ON MOBILE DEVICES





[www.fraunhofer-cingo.com](http://www.fraunhofer-cingo.com)

## **The best immersive sound experience for VR and mobile entertainment delivered by Fraunhofer Cingo®**

A truly immersive soundscape is of utmost importance for any VR experience and is a determining factor in the success of the illusion. With a stunning level of realism that creates the experience of »being there«, Fraunhofer Cingo brings audio immersion to VR devices and applications. The technology renders 3D audio content over headphones and incorporates head movements, allowing sound sources to be perceived from anywhere within the 3D space around the listener. Cingo supports rendering of fully immersive 3D audio content with channel configurations that add a height dimension, such as 5.1+2H, 7.1+4H, or Ambisonics, and allows the simultaneous placement of sound objects anywhere in the virtual space around the listener. For this reason, the MPEG-H audio standard is the ideal companion for Cingo 3D audio rendering as it can deliver immersive 3D sound for virtual environments to mobile devices at bit rates used today to deliver 2D surround sound. Cingo also creates an excellent surround sound listening experience over the built-in speakers of mobile devices, providing audio content with a more natural and clear sound.

## **Widely used in mobile entertainment and VR**

Its extensive selection of features, including loudness optimization for listening in noisy environments, has convinced industry leaders such as Google, Samsung, LG and Alcatel to integrate Cingo into their products, e.g. Samsung Gear VR, LG 360 VR and Alcatel's VISION.

[www.iis.fraunhofer.de/audio](http://www.iis.fraunhofer.de/audio)