

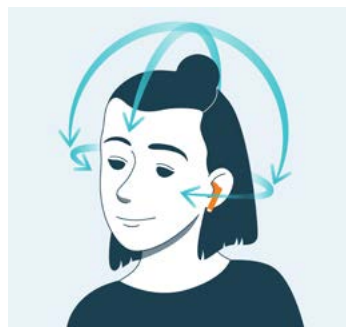
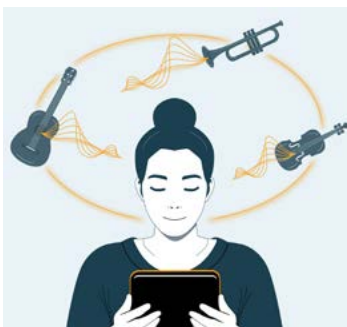
An Immersive Listening Experience on Mobile Devices

upHear Mobile Audio

With upHear Cingo, mobile devices become true multidimensional sound theaters. Plug in your earphones or use the built-in stereo speakers for enveloping 3D audio when enjoying movies or music: Our technology overcomes typical playback limitations found in such small devices by enhancing stereo content as well as providing surround and immersive audio rendering.

Features

- 3D audio rendering engine
- MPEG-H Audio support
- Low complexity
- Head tracking
- Floating- and fixed-point versions
- Easy integration



Superior Audio Experience for Consumer Devices

The upHear product portfolio, created by Fraunhofer IIS, comprises technologies for consumer-level products in the fields of microphone processing, home entertainment, and mobile audio.



upHear
by Fraunhofer IIS

Binaural Playback for Realistic Immersion

At its core, upHear Cingo relies on advanced binaural rendering. It adapts playback to the nature of human hearing, utilizing psychoacoustic principles to create virtual sound scenes. The result is a spatial impression indistinguishable from that of a real-life acoustic environment. Apart from headphones, dedicated speaker processing enables the virtual surround feature even for playback over stereo loudspeakers, like in laptops, tablets, or smartphones.



Benefits for typical applications

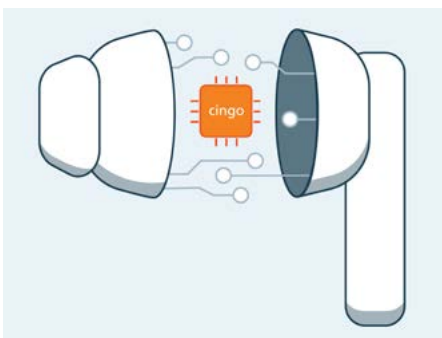
Cingo offers personalized virtual 3D audio for consumer devices, audio services and professional tools. Due to its small footprint and rich customization options, it can be deployed on servers, hosts, and end-point devices.

- **Consumer Electronics:** Headphones, mobile devices, home cinema, in-car entertainment, low-power XR audio.
- **Services:** Multimedia streaming, virtual conferencing.
- **Professional Audio:** Binaural monitoring for immersive production.

Integration

Our experts will assist you in finding the best solution for your application and in requesting the software. Our R&D expertise includes technical consultation on the ideal deployment of low-power spatial audio through Cingo rendering.

We support you on the integration and customization of our software to your individual target hardware and requirements.



Find out more on uphear.com or contact an upHear expert via uphear@iis.fraunhofer.de

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