Around Audio

Overview:

Meeami's Around Audio SDK is a lightweight, real-time spatial rendering engine that converts multichannel or stereo audio into immersive binaural sound — directly on consumer headphones, TWS earbuds, or integrated devices. Using proprietary HRTF (Head-Related Transfer Function) pipelines and sound diffusion modeling, it transforms flat audio into rich, 3D soundscapes — with just 350 KB memory and <10ms latency.

Ideal Use Cases

- **Video Conferencing Platforms**
  Spatial separation of speakers for fatigue-free, immersive meetings.

- **TWS (True Wireless Stereo) and Smart Earbuds**
  Integrated 3D audio playback for cinematic and conferencing apps.

- **Streaming & Playback Devices**
  Convert 5.1 surround or stereo content into lifelike headphone experiences.

- **Content Restoration**
  Upconvert stereo/5.1 archives to immersive audio formats.

Technical Specifications

Feature	Specification
Input Formats	5.1 multichannel, stereo
Output Format	Binaural
Model Size	349 KB total
Latency	<10 ms
CPU Usage	40–80 MHz
Platforms	Windows, Linux (x86, x64), WebAssembly
Sampling Rates	8kHz–48kHz (resampling supported)

Product Outcomes

- **Immersive Listening on Earbuds**
  Experience spatial separation of channels on any stereo device.

- **Compact, Real-Time Engine**
  Runs efficiently on embedded hardware and general-purpose CPUs.

- **Cross-Platform Integration**
  Merge-ready with Meeami VAD, VoIP, and conferencing stacks.

- **Content Enhancement**
  Adds value to video conferencing, TWS platforms, and media services.

Transformational Impact

Without Meeami Around Audio	With Meeami Around Audio
Flat stereo sound	Immersive 3D sound on headphones
Difficult to localize voices in calls	Clear spatial separation of speakers
Bulky solutions needing GPUs	Lightweight SDK (350 KB)
Limited to stereo output	Converts stereo & 5.1 → binaural

Benchmarked Specs

Metric	Value
Total Memory	349.13 KB
Latency	<10 ms
Supported Sample Rates	8–48kHz
Memory Breakdown	Text: 48KB, Data: 181KB, Stack: <1KB
CPU Load (i7)	40–80 MHz

Let's Build the Future of Audio

Meeami Spatial Audio SDK is ready for integration into your conferencing, streaming, or TWS stack.
sales@meeamitech.com