

Audio Case Study

Leading Korean consumer electronics giant delivers outstanding audio experiences by leveraging Ittiam's high performance audio solutions



SUMMARY

Customer Profile
Smartphone OEM

Region
Asia

Industry
Consumer Electronics

Solutions

- Audio Codecs
- Audio Post Processing
- Container Parsers

Challenges

- Ensure low CPU usage and memory footprint
- Ensure highly robust error handling

Explore Ittiam's [Audio offerings](#)

CUSTOMER

The customer is a multinational consumer electronics giant from Asia and one of the world's leading manufacturers of smart phones and tablets.

ENGAGEMENT BACKGROUND

The customer chose Ittiam as the solution provider for its audio requirements, based on a thorough evaluation of our audio solutions. We provided a comprehensive suite of superior quality, high performance Audio IPs – Audio Codecs, Container Parsers and Audio Post Processing solutions – on the customer's proprietary ARM Cortex A8 platform.

KEY CHALLENGES

The following are some of the key challenges we helped address:

- Low CPU usage to minimize battery consumption
- Low memory footprint for audio processing
- High robustness with capabilities to handle various erroneous and invalid conditions without causing failure in the user applications
- Ease of integration of components for faster time-to-market
- Smooth playback with play, pause and seek functions

Both the processor variant and the operating system used by the customer were new to the industry; hence Ittiam had to rapidly port the IP and fine tune the performance.

SOLUTION OVERVIEW

Audio Codecs: MP3, HE-AACv2 (includes AAC-LC and HE-AACv1), FLAC, WMA and AMR-NB

Audio Post Processing: Resampler, Mixer, Booster and Equalizer

Container Parsers: ASF, FLAC, MP3 and AAC

Our solutions were deployed in multiple consumer products based on a common platform.

IMPACT

Backed by our deep architectural know-how of the ARM processor and codec design, we addressed the customer's challenges in a timely manner, enabling the company to launch its products on schedule. The customer demonstrated strong confidence in our capabilities, further expanding the project scope and entrusting us with additional requirements for product updates.

About Ittiam

Ittiam Systems is a trusted solutions provider to world leaders in multimedia, enabling next generation video experiences through its complete suite of intelligent video technologies, systems and solutions. Backed by its proven video expertise and insights, Ittiam's products deliver real intelligence to solve its customers' most complex technology challenges, empowering them to deliver high performance, efficient and reliable video products in rapid time. Ittiam's solutions are at the heart of millions of lifestyle products that drive mobility, content access, networking and sharing.

For more information visit www.ittiam.com or contact us at mkt@ittiam.com