



Aricent's HD Video solution was deployed in 200,000 devices within 3 months of launch

Developing the Industry's First Mobile HD Video CODEC for a Leading Chipset Manufacturer

Customer Profile

The customer is a global leader in the analog and digital semiconductor IC design and manufacturing. In addition to analog technologies, digital signal processing (DSP) and microcontroller (MCU) semiconductors, the customer also designs and manufactures semiconductor solutions for analog and digital embedded platforms and application processing.

Customer Challenges

- Be the first-mover in the mobile High Definition (HD) multimedia space by being the first among all silicon vendors to have a complete HD solution on the Symbian/S60 platform
- Address design limitations of IVA 2.2 (DSP) bandwidth and memory availability

Solution

- Aricent co-developed HD Video CODECs and a highly optimized solution for the customer, based on IVA 2.2 (DSP)
- The solution included a 720p HD playback with MPEG4-SP/ AAC+ decoder at 30fps as well as 720p HD recording with MPEG4-SP/ AAC encoders @24fps on a commercially available handset

Results

- The customer achieved the desired objective of launching the first commercially available HD silicon platform
- The platform is widely accepted and has been shipped to most of the Tier-1 device manufacturers
- Aricent's development and integration methodology enabled the customer to meet an extremely aggressive schedule

Why Aricent?

Despite stiff competition from various multimedia and CODECs solution providers, the customer chose Aricent primarily for its deep domain expertise and proven track record in delivering a broad range of integrated and pre-optimized CODECs and multimedia components that worked on a variety of hardware platforms and OS (Symbian, WM, Linux and Android).

Aricent's team was also able to provide the customer with sound architectural advice on the system challenges faced by customers. This reaffirmed the customer's confidence in Aricent's capability to deliver the end product, within the aggressive timelines.

Lastly, Aricent's proven ability to scale engineering resources quickly, to meet stringent budget and development timelines was also an important factor in its favor.

Customer Challenges

The customer aspired to be a first mover in the mobile High Definition (720p HD) space, and was looking to launch an end-to-end HD enabled Symbian/ S60 based chipset targeted at device OEMs worldwide. They required this chipset to support 720p playback and record, in addition to supporting other complex video functions such as 3D graphics.

Since there was no other silicon vendor in the market that supported HD/ 720p, they wanted to get the consolidated solution out to market in less than two years (conception to launch).

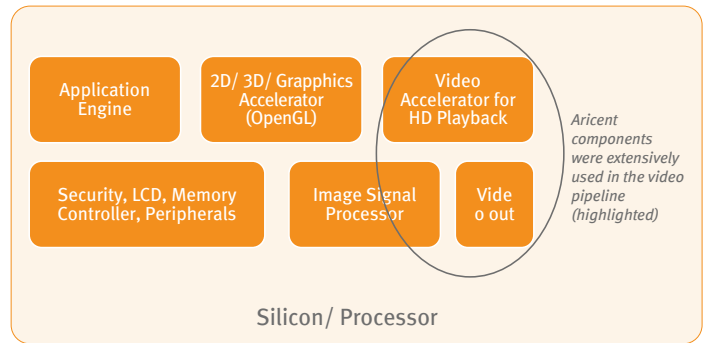
The customer was also faced with a variety of constraints in the form of the limited IVA 2.2 (DSP) bandwidth and memory availability, which posted significant system level design challenges. There was also the challenge of meeting the commercially acceptable system level performance and video quality (24 frames per second) in the given timeframe in order to be the first to launch such a platform.

Aricent Solution

Aricent worked closely with the customer to co-create the industry's first mobile platform that supported commercial grade HD components.

The key characteristics of this solution included the following:

- A highly optimized video solution, based on the IVA 2.2 (DSP)
- Support HD 720p playback with MPEG4 SP/ AAC+ decoder and MDF plug-in, reaching the targeted 30 FPS performance on commercially available handsets
- Support HD 720p recording with MPEG4 SP/ AAC-LC encoder and MDF plug-in reaching the targeted 24 FPS performance on commercially available handsets
- Included other decoders - AAC+Decoder (ARM Cortex A8), AAC LC Decoder (ARM Cortex A8), H.264 BP Decoder (720p for IVA 2.2)



Results

The customer was able to successfully launch the first mobile silicon platform with commercial grade HD Video CODECs. The platform has been shipped to various Tier 1 OEMs worldwide, and some high-end devices from these manufacturers have already hit the consumer market.

Aricent CODECs are used extensively in the customer's silicon architecture.

Aricent's approach to integration ensured that the product was introduced on time, allowing them to meet an extremely aggressive delivery schedule. The Aricent HD MPEG4 SP solution was the first HD MPEG4 SP CODEC in the mobile space to be commercialized.

The co-created solution is widely accepted and has been deployed in over 200,000 devices within the first 3 months of launch.

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