



# HEVC DECODER

**CPU & GPU Accelerated**  
HEVC Compliant Software Decoder for  
**ARM-Based** Media Players

## Key Features

- Fully Compliant to Standard
- Up to Level 5.0 Main Profile
- Slice Types – I, P and B
- Tiles, Slices and Dependent Slices
- Coding Units 64x64, 32x32, 16x16 and 8x8
- Prediction Units Including Asymmetric Partitions
- Transform Units 32x32, 16x16, 8x8 and 4x4
- De-blocking Filter
- Sample Adaptive Offset Filter
- Entropy Coding – CABAC
- Efficient Multi-Threaded Implementation to Exploit Multiple Cores in Cortex-A Platforms

## Decoder Library Features

- Supports StageFright Framework for Android
- OpenMax IL Plugin for iOS.
- MFT Plugins for Windows

The Squid HEVC decoder library is fully compliant with the Standard HEVC reference model. The software has been optimized for performance on ARM Cortex-A9, A15 platforms using ARM NEON instruction set alone as well as ARM Mali GPUs using OpenCL technology. This decoder takes full advantage of available parallelism, including parallel decoding of tiles, independent slices and wave front processing. The decoder architecture exploits all available processor cores and is optimized for better utilization of instruction and data caches. The Squid HEVC decoder library is ideally suited for video streaming/play back applications on smart phones and tablet devices, and can be integrated into standard media frameworks.

Processor	Resolution	Decode Rate
Cortex A9	720p	60 fps
Quad Core at 1.5GHz*	1080p	30 fps
Cortex A15	720p	60 fps
Dual Core at 1.5GHz*	1080p	30 fps
Cortex A15	720p	60 fps
Quad Core at 1.5GHz*	1080p	60 fps

\* Using Graphic Core with OpenCL saves up to 50% CPU utilization at a given decode performance.

## Squid Design IP

The Squid Image, Vision and Video Processing core IP is ideally suited for integration into low power Systems-on-Chips (SoCs) to drive HEVC Encode and Decode from 720p to 4K, as well as H.264 AVC and prior codec standards, with scalable bit rates and quality levels. It also supports pre & post processing including MCTF and object detection and tracking.