

Technical Showcase

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Kodi Playback with Standard V4L2 Graphics Stack

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What is demonstrated Video decoder: ff-h264_v4l2m2m (Video stream: 1,920x1,080 px, 1.78 AR, 30.000 m: FL, FR, FC, LFE, SL, SR, unknown

Hardware Information

- Geniatech DB4 based tablet
 Qualcomm® Snapdragon™ 410 series processor
 1080p@30fps HD H.264, 720p H.265
- LibreComputer AML-S905X-CC Amlogic S905X SoC, up to 4k30 H.264, 4k60 H.265



What was improved

Full upstream implementation of:

- Hardware Accelerated Video Decoding (Mainly H.264) with the generic V4L2 Mem2Mem API
- Zero-copy rendering with DRM Atomic kernel Drivers
- DMA-BUF transferred from V4L2 to DRM
- FFmpeg V4L2 Mem2Mem integration with Kodi
- Kodi GBM Display for Atomic Direct to Plane rendering

Software Status:

- Current Kodi master
- FFmpeg v3.3.2 + Off-Tree patch for DMABUF
- Linux 4.18 + WiP patches for Amlogic (Video Decoder, DRM Overlay Plane, Audio Card)
- Wrapped up into LibreELEC distribution

Source code or detail technical information availability

Source Code:

- kernel.org
- https://github.com/xbmc/xbmc
- https://github.com/LibreELEC/LibreELEC.tv
- https://github.com/chewitt/LibreELEC.tv/tree/amlogic