



VisualOn

VOME the Solution for Android



VisualOn

Mission: to become the default multimedia software solution provider for mobile devices

- **Founded in June 2003, backed by US VC firms**
- **Headquarter in Silicon Valley**
- **Offices in Los Gatos CA, Austin TX, Turku Finland, Taipei Taiwan and Shanghai China**
- **Wholly Owned Subsidiary in Shanghai, China**
- **VisualOn software bundled with semiconductors, mobile phones, navigation devices, mobile TV devices, PCs, and mobile content subscriptions**



VisualOn Advantages

Delivers hardware like quality and power efficiency with a software solution

- **Best-in-class solution** for next generation devices: configurable multimedia software suite
- **Modular Architecture** allows *VisualOn* software to complement existing hardware with support for new video formats, extending platform functionality & life cycle
- **Patent** pending technology delivers superior end user experience through proprietary optimization algorithms
- **Easy integration** = Optimized for ARM application processors
- **Lower Cost** = Software solution reduces BOM

VisualOn Media Engine (VOME) for Android

- **Handset OEMs unhappy with OpenCORE**
- **VOME is the BETTER alternative to OpenCORE**
 - OpenMAX Plug-and-play compatible – Ease of Integration
 - Order-of-magnitude smaller code size
 - Drastically lower overhead: 5% vs. 50%
 - Reduce development and maintenance effort, shorten time-to-market
- **VOME is based on production proven technology**
- **100% compliant with Android Java APIs**
- **OpenMAX compliant multimedia framework**
- **Android compatible and CTS compliant**

VisualOn Media Engine (VOME) for Android

- Android based handsets are suffering from a low-quality multimedia framework OpenCORE
- VisualOn's VOME is a plug and play replacement for OpenCore
- OpenMax based multimedia framework; eases integration efforts; Simple to add new formats



Features	VOME	OpenCORE
Designed for Android	Yes	No
OpenMAX compliant	Yes	No
Tunnel mode support	Yes	No
Thread overhead	No	Yes
Plug-N-Play with OpenMAX Components	Yes	No
CPU overhead	~10%	50%+

VisualOn Supported Codecs & File Formats

Video Decoders

- H.264 BP
- H.264 MP
- H.263
- MPEG-4 SP
- MPEG-4 ASP
- DivX
- XVID
- WMV BP
- WMV MP
- Motion JPEG
- RealVideo 8, 9, 10
- MPEG-1
- MPEG-2
- On2 VP6
- Sorenson Spark

Audio Decoders

- MP3, MP2
- AAC
- AAC+
- eAAC+
- BSAC AAC
- AMR
NB/WB/WB+
- QCELP
- EVRC
- OGG
- Real Audio
- WMA
- WMA Lossless
- AC3
- Dolby Mobile 2
- MIDI

Encoders

- Video:
 - H.264 BP
 - H.263
 - MPEG-4
- Audio:
 - AMR NB
 - AMR WB
 - QCELP
- Image:
 - JPEG
 - PNG
 - GIF
 - TIFF
 - BMP, WBMP

File Formats

- mp4, 3gp, m4v
- mp2, ts
- rm, rmvb
- wmv
- avi, asf
- jpg, png, gif, tif, bmp
- mp1, mp2, mp3
- acc
- amr
- qcp
- evc
- ogg
- wma
- ac3
- mid

The VisualOn Solution

VisualOn Applications:

Media Player: video, audio, photo, streaming, ring tones, ring back tones

Media Recorder: video, audio, photo

Mobile TV: DVB-T/H, ISDB-T, MediaFLO, CMMB, ATSC-M/H, T-DMB, DMB-T/H

VisualOn Middleware:

OpenMAX Compliant Media Framework, 3GPP/3GPP2 Reader/Writer, RTP/RTSP/HTTP Stack, Mobile TV Stack, Multiplexers, De-Multiplexers, DRM, Sourcer, Renderers

Operating Systems: Windows CE/Mobile, Android, Nucleus; Windows XP/Vista, Linux

VisualOn Optimized Codecs:

Video: H.264, MPEG-1/2/4, H.263, WMV, DivX, XVID, RealVideo, Flash Video, Motion JPEG

Audio: AMR-NB/WB/WB+, AAC/AAC+/eAAC+/BSAC, MP3, WMA, AC3, QCELP, EVRC; MIDI

Image: JPEG, GIF, BMP/WBMP, PNG, TIFF

Processors: ARM, Samsung, QualComm, TI, Intel, Marvell, AMD, SiRF, ST-Ericsson, Freescale

- **Standard compliant codecs highly optimized for performance**
- **Modular solution allows customers to select offering mix they need**
- **Enable “iPhone quality” video playback in software**
- **Complete production proven multimedia software suite for handsets**