videantis
passion for video

v-MP2030MOB
Mobile HD Video Codec Integrated Solution

The videantis v-MP2030MOB is a complete video solution integrating both stream processing and video processing into a standalone subsystem with minimum load on the host CPU. The v-MP2030MOB is the entry point for mobile HD video of the scalable v-MP20x0MOB product line with the smallest silicon cost and lowest power budget.

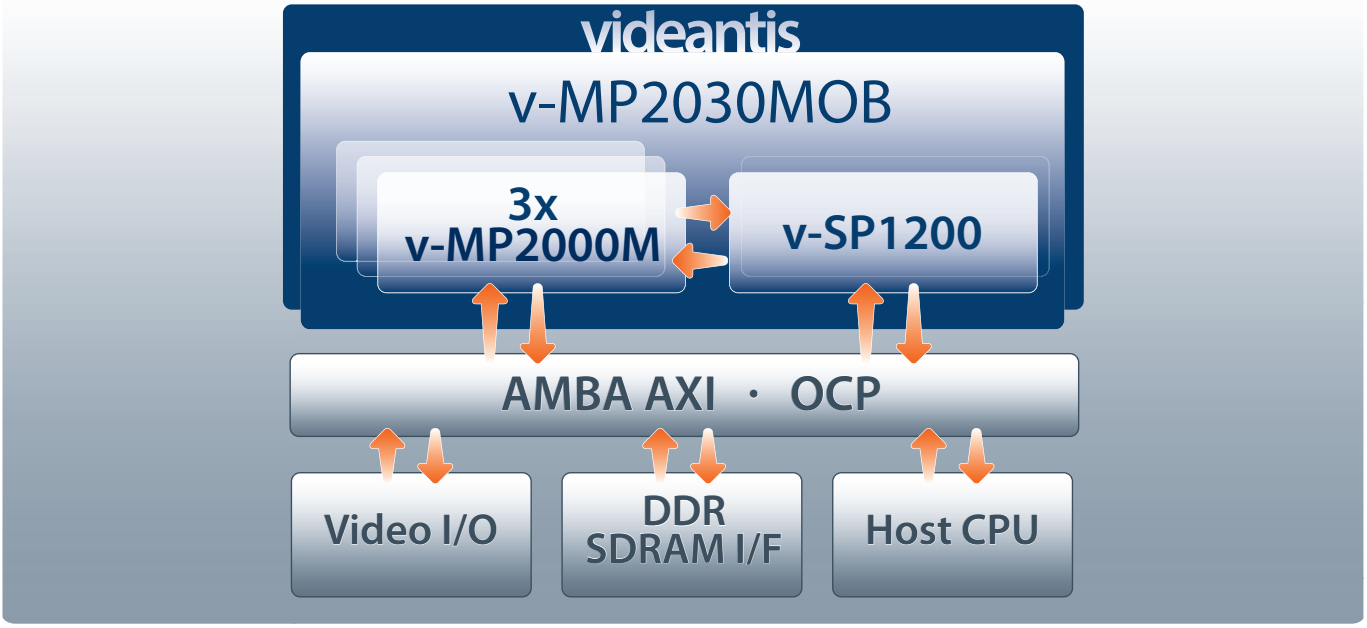
Multi-standard decoding is supported up to 720p resolution for a wide and extensible range of video standards like H.264 BP, MPEG-4 SP/ASP (DivX), WMV9/VC-1 SP/MP, and RealVideo at mobile bitrates.

Furthermore, the v-MP2030MOB is the solution with the smallest possible area footprint to support multi-standard 720p video encoding including H.264 BP, MPEG-4 SP, and H.263. Still image JPEG encoding and decoding is supported at a pixel rate up to 45MPixel/s. In addition, value-add image and video processing features can be performed in parallel to decoding/encoding up to D1 resolution.

The v-MP2030MOB is available as a drop-in solution proven in real system environments and optimized to tolerate long memory access latencies of real-world systems. Extensive conformance testing has been performed to assure high product quality and full customer satisfaction. Through its field upgradeability in silicon, the v-MP2030MOB provides a future-proof solution as product lifetime can be extended through addition of further standards and value-add features simply by firmware update.

KEY ADVANTAGES

- High quality video up to 720p for mobile resolutions
- Minimum load on host CPU
- Low-power for extended battery life
- Very small silicon area footprint
- Both en- & decoding on single footprint
- Field-upgradeable codecs and features



Features and Benefits

Complete solution package
> Triple v-MP2000M video engine + v-SP1200 multi-standard stream unit
> Minimum load on host CPU
> Entry-point HD solution of the scalable v-MP20x0MOB product line

Mobile video & imaging standards up to 720p
> H.264/AVC BP decode & encode, up to 10Mbit/s
> MPEG-4 SP, H.263 decode & encode
> MPEG-4 ASP, DivX, XviD decode
> WMV-9, VC-1 SP/MP decode
> RealVideo 8/9/10 decode
> Flash Video (Sorenson Spark) decode & encode
> JPEG decode & encode up to 45MPixel/s
> Extensible to further standards on same silicon: On2 VP6, AVS, MPEG-2/-1…

Value-add image/video processing features
> Image enhancements, rotation, scaling
> Graphic overlays, blending, picture in picture
> Deinterlacing, denoising, deblocking
> Color conversion (RGB/YUV, YUV/RGB, HSV)
> Image stabilization
> Performed in parallel to en-/decoding

Very small silicon area footprint
> 420kgates core logic + 160kB memories
> Target technologies: 180nm…28nm
> 3.1mm² silicon area in 65nm technology
> incl. sync. bus interfaces & all memories

Low frequency requirements, ultra low power consumption for extended battery life
> Reduced switching activity for ultra low power consumption through optimized architecture
> Only 49mW for H.264 BP 720p high-quality encoding in 65nm technology

APPLICATIONS

- High-end feature phone
- Portable media player (PMP)
- Camcorder
- IPTV
- Home entertainment
- Streaming video

Easy system integration
> SoC bus interface options: 32/64 bit, synchronous/ asynchronous
> AMBA AHB, AXI, OCP, others

Short time to market & future proofness
> Reliable core, pre-verified in silicon
> Various FPGA prototyping platforms supported
> Field-upgradeable features and codecs by firmware download

Ready to use
> Extensive conformance testing
> OpenMAX IL 1.1 support for seamless integration into mobile environments

Complete solution
> Comprehensive applications suite, fully optimized for performance and resource usage
> Fully documented API in C source code for codecs and features
> Example integration in application framework
> One-stop offer including full integration support options

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