

H.264 MPEG-4 AVC/MVC encoding IP

- Designed for integration in smartphones, camcorders, wireless displays, set-top boxes, webcams and video surveillance encoding ICs.
- H.264/AVC Baseline, Main and High profile and H.264/MVC Stereo High profile (3D Ready) real-time encoding up to HD resolutions.
- State of the art video quality thanks to Allegro DVT broadcast quality H.264 compression algorithms.
- Hardwired architecture for minimum gate count and optimized power consumption.



H.264/MPEG-4 AVC/MVC encoding

HIGH-PROFILE/HIGH-DEFINITION

Allegro DVT's H.264/MPEG-4 AVC/MVC encoding IP is a real-time hardware (RTL) video encoder. It supports H.264/AVC baseline, main and high profiles and H.264/MVC stereo high profile up to high definition resolutions.

Allegro DVT's H.264 encoding IP is perfectly suited for integration in applications like:

- Smartphones
- Tablets
- Camcorders/DSC
- Webcams/Video surveillance
- Wireless Display
- Set-top boxes

Technical Features

- State of the art H.264/AVC baseline, main, high profile and H.264/MVC stereo high profile (3D Ready) encoding technology
- Any video resolution up to high definition
- Multi channels encoding
- Fast and easy integration within a wide range of System-On-Chip (SoC) designs
- Hardware architecture minimizes both gate counts and power consumption
- Independent entity, requiring minimum support from the SoC embedded CPU
- Tested using Allegro DVT's "industry standard" certification streams
- Motion estimation algorithms optimized to fit the memory bandwidth and latency requirements of consumer SoCs

Type

Supported

Profile/level	H.264/AVC Baseline, Main and High profiles up to level 4.2 H.264/MVC Stereo High Profile up to level 4.1
Input format	4:2:0 or monochrome Progressive or Interlaced content with PAFF support
Slice Type	I, P, B
Intra prediction	All intra4x4, intra8x8 and intra16x16 modes
Inter prediction	Support for 16x16, 16x8, 8x16, 8x8, 8x4, 4x8, 4x4 partitions ¼ pel interpolation
Transform	4x4 and 8x8
Quantization	Flat, default and custom scaling list
RDO	YES
Weighted Prediction	YES
Entropy coding	CABAC, CAVLC and PCM coding modes support
Loop filter	In-loop deblocking filter
Output bit rate	Up to 50 Mbit/s
Rate control	CBR, VBR
Latency	Ultra Low-Latency mode: glass-to-glass latency below 20ms

Deliverables

- RTL source code
- C control software
- Bit accurate reference model
- Documentation

Allegro DVT is a leading provider of H.264/MPEG-4 AVC | SVC | MVC solutions, including industry standard compliance test suites and real-time audio/video encoders and transcoders. Allegro DVT products have been chosen by more than 100 major IC providers, OEMs and broadcasters.

For more information, visit <http://www.allegrodvt.com> or contact info@allegrodvt.com.



15, avenue du Granier
38240 Meylan – FRANCE

info@allegrodvt.com
www.allegrodvt.com

+33 4 76 42 66 85