

AVC/H.264

High Performing, Reliable Encoding and Decoding

MainConcept AVC SDK is proven to encode faster than open source and comes packed with features, including 4:2:2 10-bit pro format support and HDR support for HLG and PQ/HDR-10. That's why MainConcept AVC remains the top choice of professionals.

AVAILABLE PACKAGES

AVC/H.264 ENCODER SDK	Create AVC-based media up to 4:2:0 color space with 8-bit-depth and related audio and multiplexing components	AVC/H.264 Video Encoder AAC Encoder Fraunhofer AAC Encoder MP4 Multiplexer MPEG Multiplexer
AVC/H.264 ENCODER SDK BROADCAST	Add-on package for AVC Encoder SDK supporting up to 4:2:2 10-bit (plus 4:2:0 8-bit) & related audio & multiplexing components	AVC/H.264 Encoder SDK, plus AVC Encoder Broadcast License MXF Multiplexer
INTEL QUICK SYNC FOR AVC/H.264 ENCODER SDK*	Add-on package for AVC Encoder SDK enabling AVC/H.264 video encoding in hardware on Intel® Core® processors	AVC/H.264 Encoder SDK, plus AVC IQSV License MPEG Multiplexer
AVC/H.264 DECODER SDK	AVC Decoder SDK with support for up to 4:2:0 8-bit video and related audio and demultiplexing components	AVC/H.264 Video Decoder Media File Importer (LL) AAC Decoder MP4 Demultiplexer MPEG Demultiplexer
AVC/H.264 DECODER SDK BROADCAST	Add-on package for AVC Decoder SDK supporting up to 4:2:2 10-bit video with related audio & demultiplexing components	AVC/H.264 Decoder SDK, plus AVC Decoder Broadcast License MXF Demultiplexer
AVC/H.264 SMART RENDERING SDK	Add-on package to enable PQ / HDR-10 to HLG, HLG to PQ / HDR-10 and PQ / HDR-10 to SDR conversion	AVC/H.264 Encoder SDK, plus AVC/H.264 Smart Render Wrapper AVC Smart Render License MXF Multiplexer
SVR360 FOR AVC/H.264	Add-on feature license to AVC Encoder SDK Broadcast allowing encoding in virtually unlimited resolution, designed to meet the needs of 360/VR applications	AVC/H.264 Encoder SDK Broadcast, plus SVR360 AVC License

2X GREATER

EFFICIENCY ENCODING
THAN WITH X264

SAVE TIME

- 2X faster encoding with AVC compared to open source ⁽¹⁾
- 55% speed improvement for decoding of AVC Intra video files ⁽²⁾
- Precise bitrate adherence (+/-2%) for encoding to on-demand video targets

KEY FEATURES

- AVC 4:2:2 10-bit pro format support
- HDR support for HLG and PQ/HDR-10 encoding
- Unrivalled range of encoding presets
- Professional camera support for Sony XAVC and Panasonic AVC Ultra 4:2:2 and 4:2:0
- Frame-accurate smart rendering for AVC Intra and other pro formats
- One API for software encoding or Intel QSV hardware encoding

CODEC OPTIMIZATION WITH MAINCONCEPT PROFESSIONAL SERVICES

⁽¹⁾ According to recent encoder test data comparing MainConcept AVC against x264 ⁽²⁾ Compared to previous version of MainConcept AVC

OPERATING SYSTEM

- Microsoft® Windows® 7, Windows 8, Windows 10 (64-bit)
- Apple® macOS 10.9 and newer (64-bit)
- Linux Ubuntu 14.04 LTS, CentOS 7.2 glibc 2.17 (64-bit)

STREAM TYPES & FORMATS

ELEMENTARY STREAMS:

Generic AVC/H.264 ES up to 4:2:2 10-bit (up to 4:4:4 12-bit in decoder), Apple HLS, DASH-264

PROGRAM STREAMS:

Generic AVC/H.264 Program Streams

TRANSPORT STREAMS:

Blu-ray Disc, HD DVD, HDTV, Digital TV, AVCHD 1.0 / 2.0, Sony NXCAM, 1Seg

MP4:

Sony XAVC-S, Sony PS3 / PS4, Sony PSP, Apple iPod / iPhone / iPad / TV, Adobe Flash (F4V), HTML, Microsoft Silverlight

3GP:

Suitable for older generation cell phones and tablets

MXF (BROADCAST ONLY):

Sony XAVC, Panasonic LongG, Panasonic P2 AVC-Ultra (AVC-I Class 200), P2 AVC-Intra Class 50 / 100 (Specialized Operational Pattern "Atom" SMPTE 390M), Panasonic AVC-Intra LT-4K and LT-2K, RP 2027 AVC-Intra 50, 100 and 200, AVC-Ultra (AVC-Intra 200) into OP-Atom (MXF)

SPECIFICATIONS

ENCODER

- ISO/IEC 14496-10 compliant
- Baseline, Main & High Profile up to 4:2:2 10-bit*
- Maximum resolution 8192x4320 @ 60 fps (Level 6.2)
- SVR360 to encode VR360 spheres beyond the AVC resolution limit*
- Smart Rendering modes: Smart Copy and Re-Encode*
- Strict HRD compliance
- Advanced compression algorithms
- Parameter compatibility validation
- Target Quality Mode (TQM) support
- CBR/VBR, 1-pass & 2-pass encoding
- Quarter pel motion estimation
- Low Delay flag (no latency)
- Pyramid GOP coding
- Rate-distortion optimization

* 4:2:2 10-bit encoding and decoding support, Smart Rendering, and SVR360 are optional features which can be purchased as an add-on to your existing AVC/H.264 encoder or decoder license.

DECODER

- Baseline, Main, High, High 4:2:2 / 4:4:4 profile support*
- Optimized for most efficient CPU usage
- 8-bit / 10-bit / 12-bit support
- I, P and B slices
- Low Delay flag (no latency)
- Field pictures
- Symmetric multi-processing, optimized for Hyper Threading processors and multi-CPU platforms
- Color space conversion
- Deinterlacing (via two software modes, and by means of VMR)
- Chroma upsampling
- Double rate (generating a progressive frame from every field)
- Fields reordering
- DXVA Hardware acceleration
- Stream-Analyzing API (VESA)