

Spin Digital HEVC/H.265 software encoder

(Spin Enc) enables ultra-high-quality video with the highest compression level. Encoding, transmission, and storage of video in 4K, 8K, and beyond are now possible with commodity computing technologies.



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HEVC/H.265 encoder for production, contribution, and distribution of professional video for broadcast, VoD, and creative studios.

Spin Digital HEVC/H.265 encoder is ready for the next generation of high-quality video systems, providing support for Ultra HD (UHD), High Dynamic Range (HDR), High Frame Rate (HFR), Wide Color Gamut (WCG), and Virtual Reality (360° video).

Product Highlights

- Fast offline encoding software solution
- Ready for 8K and beyond
- Significantly better compression and quality than competing encoders
- Enables WCG and HDR with up to 12-bit video
- Compatible with ARIB STD-B32 standard
- Versatile high-precision pre-processing filters
- Preserves color resolution with 4:2:2, 4:4:4, and RGB formats
- 22.2-ch AAC audio encoding and decoding

HEVC/H.265 Encoder Package

- Encoder: standalone HEVC/H.265 encoder
- Transcoder: HEVC/H.265 decoder and encoder integrated in FFmpeg
- SDK: encoder plugin for FFmpeg (Libavcodec)

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SPIN DIGITAL HEVC/H.265 ENCODER



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Support for the HEVC standard:

- Main and Main 10 profiles
- Range Extensions (HEVCv2) profiles
- ARIB STD-B32 version 3.9

Resolutions: 4K, 8K, and beyond

Color formats: 4:2:0, 4:2:2, 4:4:4, RGB

Bit depths: 8-, 10-, 12-bit

Color spaces: BT.601, BT.709, DCI-P3, BT.2020

HDR support: ST2084 transfer function, ST2086 HDR metadata, HLG

Coding configurations:

- Intra-only, low-delay, random-access, chunk-based
- Hierarchical GOP sizes: 1, 2, 4, 8, 16, 32 frames
- Constrained motion vectors for tiled encoding

Rate control: CBR, VBR, constant quality

Advanced Audio Coding (AAC): Multichannel up to 22.2

Quality enhancements for 360° video, mono and 3D (stereo)

Performance optimizations:

- Advanced multithreading: wavefront, tiles, frame-level parallelism
- SIMD processing: SSE4.1, AVX2

	Input Formats	Output Formats
HEVC encoder	Raw: YUV, RGB	Elementary Stream
HEVC transcoder	DPX, TIFF, PNG, ProRes, DNxHD, CineForm	MP4, MPEG2-TS, MKV, HLS, DASH

COMPRESSION PERFORMANCE

Bitrate reduction for the same objective quality and encoding speed compared to x265 version 2.9 (preset veryfast) and Intel SVT-HEVC version 1.4 (preset 3).

	4:2:0 10-bit		4:2:2 10-bit		4:4:4 10-bit	
	4k	8k	4k	8k	4k	8k
x265 v2.9	35%	32%	33%	30%	35%	33%
SVT-HEVC v1.4	36%	37%	35%	35%	40%	38%

HIGH-PRECISION VIDEO PRE-PROCESSING FILTERS

Resolution scaling: nearest neighbor, bilinear, bicubic, lanczos2, lanczos3

Chroma sampling and pixel format conversion: 4:2:0, 4:2:2, 4:4:4, RGB

Bit depth conversion: 8-, 10-, 12-bit

Color space conversion: BT.601, BT.709, DCI-P3, BT.2020

Transfer function conversion: SDR, PQ (ST2084), HLG (BT.2100) with tone mapping

Cropping, padding, rotation, mirroring

Blending: image overlays

Spherical format conversion: equirectangular, cubemap, dynamic viewport, rotation

Filters can be used individually or combined for complex conversions

Automatic filter chain generation based on desired target format

PLATFORM SUPPORT

Processor	X86_64
OS	Linux, Windows 7/8.1/10

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