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.

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)
SPIN DIGITAL HEVC/H.265 ENCODER

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
HEVC transcoder | DPX, TIFF, PNG, ProRess, DNxHD, CineForm

<table>
<thead>
<tr>
<th></th>
<th>4:2:0 10-bit</th>
<th>4:2:2 10-bit</th>
<th>4:4:4 10-bit</th>
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<tr>
<td>4k</td>
<td>8k</td>
<td>4k</td>
<td>8k</td>
</tr>
<tr>
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<td>23%</td>
<td>34%</td>
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<td>17%</td>
<td>Not supported</td>
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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