

SPiRiT H.264 Codec

SPiRiT H.264 codec implements the H.264 (baseline) video compression standard. It provides high-quality video encoding and decoding for real-time video transmission applications. SPiRiT H.264 supports a wide range of data rates. The codec preserves good picture quality both at high and low bit rates.

SPiRiT H.264 is deeply optimized for real-time image compression on PC and ARM platforms and can be ported to other platforms. SPiRiT H.264 provides real-time encoding of 4CIF on a 2 GHz CPU.

Features

- ITU-T H.264 Baseline, Main, High Profiles standard fully compliant
- Picture formats supported: YUV420, YUV422, YUV444, YUV410, YUV411, RGB24, BGR24, RGB32, Grayscale8, RGB565, RGB555
- Standard picture sizes (SQCIF, QCIF, CIF, 4CIF, 16 CIF) and custom picture sizes
- Grayscale coding mode is available
- Tree structured motion compensation
- Subpixel motion compensation (up to quarter-pixel precision)
- All inter and intra prediction modes specified by standard
- Multiple Slice Encoding (I, B and P slices supported)
- Multiple Reference Frames
- Low Delay DPB management Mode
- Dynamic allocation of key frame insertion
- Deblocking Filter Mode
- Fast Encoding Mode
- Robust coding mode: using redundant intra-macroblocks
- Decoder supports Arbitrary Slice Ordering and Flexible Macroblock Ordering
- CABAC, PAFF/MBAFF, 8x8 DCT
- Quantization scaling matrices
- Separate Cb and Cr QP control
- RTP packet generation and decoding of RTP packet flow are supported in compliance with the RFC 3984 (modes 0 and 1 are supported). Parameters set is transmitted in-band
- Unbroken bitstream, packetized bitstream, and framed bitstream modes are supported
- Timing support for easy video/audio synchronization
- Bit rate range for CIF: 32Kbps – 3Mbps

Benefits

- High performance video coding and decoding
- Low resource consumption
- Wide range of picture formats
- Easy-to-integrate

Key Features

- Low CPU usage
- Small footprint
- Simple API
- ITU-T standards compliant

Applications

- Video over IP
- STB
- Telepresence
- Mobile TV
- Video surveillance and security
- Video-on-demand

Availability

SPiRiT H.264 is available as a C library or as a DirectShow filter which makes possible the integration on:

- 32- and 64-bit
- PC Intel
- ARM

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