

## SPiRiT H.263 Codec

SPiRiT H.263 codec provides high-quality video encoding and decoding for real-time video transmission applications. The codec preserves good picture quality both at high and low bit rates.

SPiRiT H.263 is deeply optimized for real-time image compression on PC and ARM platforms and can be ported to other platforms. The codec performance depends on input sequence features and compression parameters. For example, the performance does not exceed 10% CPU usage for simultaneous QCIF encoding and decoding at 30 fps (talking head with static background) on a 3 GHz CPU.

### Features

- Platform: ARMv5te, ARMv7-a, ARMv8-a; Intel x86/x64
- Operating System: Windows, Linux, macOS, Android, iOS
- Picture formats: YUV420, YUV422, YUV444, YUV410, YUV411, RGB24, BGR24, RGB32, Grayscale8, RGB565, RGB555.
- Standard picture sizes: SQCIF (128x96), QCIF (176x144), CIF (352x288), 4CIF (704x576) and 16 CIF (1408x1152).
- SPiRiT H.263 codec is compliant with the ITU-T H.263 standard:
  - H.263 Baseline
  - Annex D - Unrestricted Motion Vector Mode (H.263, H.263+)
  - Annex E – Syntax-based Arithmetic Coding (H.263)
  - Annex F - Advanced Prediction Mode (H.263, H.263+)
  - Annex G – PB-frames mode (H.263)
  - Annex J - Deblocking Filter Mode (H.263+)
  - Annex I - Advanced INTRA Coding Mode (H.263+)
  - Annex K – Slice Structured Mode (H.263+)
  - Annex M – Improved PB-frames mode (H.263+)
  - Annex N – Reference Picture Selection mode (H.263+)
  - Annex S - Alternative INTER VLC Mode (H.263+)
  - Annex T - Modified Quantization Mode (H.263+)
  - Custom Picture Format ( H.263+)
  - Custom Picture Clock Frequency (H.263+)
- Grayscale coding mode is available.
- Up to half pixel precision for motion compensation.
- RTP packet generation and decoding of RTP packet flow are supported in compliance with the RFC 2190 (H.263), RFC 2429 (H.264+). Mode-A and –B packets are supported.
- Unbroken bitstream, packetized bitstream, and framed bitstream modes are supported.
- Timing support for easy video/audio synchronization.
- Accurate bit rate control.
- Frame rates: up to 30 fps (or more, in the case of Custom Picture Clock Frequency).
- Bit rate range: 20 Kbps – 3 Mbps

### 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-enabled handsets
- PDAs
- IP videophones
- STB
- Video conferencing

### Availability

SPiRiT H.263 is available as a C library or as a DirectShow filter on

- 32- and 64-bit
- PC Intel
- ARM
- TI C64xx
- TI OMAP3

### CONTACTS

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