

# H.263 Video Codec

www.streaming-networks.com

Optimized for Philips Nexperia™ media processors (with TriMedia VLIW processor core)



## ITU compliant

Meeting ITU standards

## High Quality Video

Supporting resolution upto 4CIF (704x576)

## LBR & HBR Support

Supports 10 Kbps - 128 Kbps in LBR mode and 128 Kbps - 1 Mbps in HBR mode

## OVERVIEW

The fully ITU H.263-compliant Streaming Networks software video codec brings high-quality video encoding and decoding to embedded systems that require a low memory footprint. Optimized for use with the Philips Nexperia family of media processors (with TriMedia VLIW processor cores), the software codec is flexible, scalable, cost-effective, and easy-to-use.

## BIT-RATE OPTIONS

The codec is available in two versions: low-bit-rate (LBR) and high-bit-rate (HBR). The LBR version delivers bit rates from 20 to 128 Kbps and is for use in applications that require a narrower communications pipe, such as video conferencing and remote video surveillance. The HBR version, with bit rates from 128 Kbps to 1 Mbps, is for use in applications that use a wider pipe, such as video-on-demand, traffic monitoring systems, and stable storage recording.

The LBR version encodes and decodes the baseline plus the four negotiable options of PB frames, UMV, AP, and SAC filters. The HBR version encodes and decodes the baseline and the H.263 streams.

## SUPPORTED IMAGE RESOLUTIONS

The codec can be used with a variety of images sizes and types, ranging from SQCIF (128x96), QCIF (176x144), CIF (352x288) and 4CIF (704x576). To improve video quality, there are de-blocking filters and input noise reduction filters.

Proprietary extensions improve performance. A 2CIF option retains motion detail by capturing video on a field-by-field basis. A 4CIF option enables transmission of still images. Negotiable options with pre- and post-processing filters improve video quality on low-bit-rate connections.

## FRAME RATES

Frame rates are specific to individual applications and are influenced by factors such as image size and image quality, but the LBR version typically delivers up to 15 fps (CIF) and the HBR version typically delivers up to 30 fps (CIF).

## API DOCUMENTATION

A well-documented, easy-to-use application programming interface (API) is included with the codec. The API lets developers control library behavior and provides all the functionality for frame capture, encode/decode, and display.

## KEY FEATURES

- Fully ITU-compliant software video codec for
  - Embedded systems with low memory footprint
  - Philips Nexperia family of media processors (with TriMedia VLIW processor cores).
- Low-bit-rate (LBR) version\
  - Bit rates: 20 to 128 Kbps
  - Baseline plus four negotiable options (PB frames, UMV, AP, SAC filters)
  - Frame rates: up to 15 fps (CIF) typical
- High-bit-rate (HBR) version
  - Bit rates: 128 Kbps to 1 Mbps
  - Baseline plus H.263 streams
  - Frame rates: up to 30 fps (CIF) typical
- Range of image sizes and types
  - SQCIF (128x96), QCIF (176x144), CIF (352x288), 4CIF (704x576)
- Proprietary extensions for improved performance
  - Field-by-field video capture
  - Transmit still images
  - Higher quality on low-bit-rate connections
- Well-documented, easy-to-use API

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