Beamr
FFmpeg Plugin

Overview Description / Industry Application

How it works.

The Beamr FFmpeg plugin is delivered in a Git patch that speaks to the FFmpeg code base. The code produced by this process is configured to use standalone installations of Beamr 4, Beamr 5, and Beamr 5x SDKs to build FFmpeg executables.
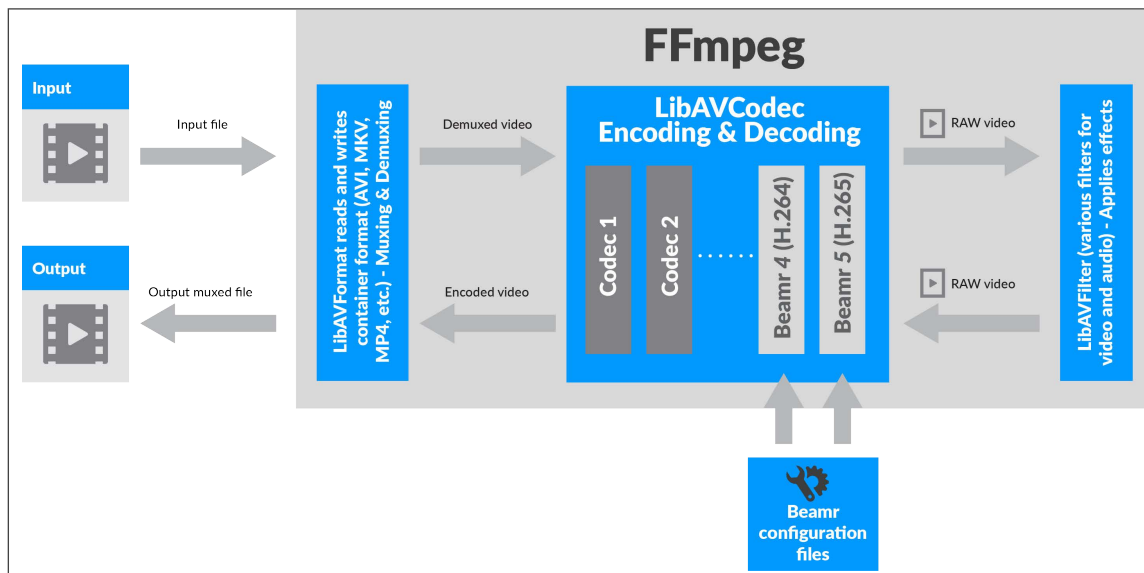
Meeting the needs of the modern video service.

For broadcasters and video streaming service providers looking to leverage FFmpeg in their video workflows along with Beamr codec SDKs, the Beamr FFmpeg plugin integrates Beamr 4, Beamr 5, and Beamr 5x directly into FFmpeg v3.3.5/3.4. FFmpeg offers a command line interface for transcoding multimedia files and is commonly used because of its ability to support a wide range of formats.

The Beamr FFmpeg plugin seamlessly accomplishes two goals. First, it provides traditional FFmpeg users the ability to use the Beamr codec SDKs within their familiar interface. And second, it gives Beamr SDK users a full-featured transcoding solution to implement their video processing workflows.

The first goal is accomplished by using standard FFmpeg parameters wherever possible for the Beamr FFmpeg plugin, including mapping of FFmpeg x264 and x265 parameters. The second objective is achieved by providing a mechanism that allows users to specify Beamr 4, Beamr 5, and Beamr 5x parameters as command line arguments, and in addition, specify Beamr codec SDK configuration files for the encoding operations.

FFmpeg

Input

Input file

Output

Output muxed file

LibAVFormat reads and writes container format (AVI, MKV, MP4, etc.) - Muxing & Demuxing

Demuxed video

Encoded video

LibAVCodec Encoding & Decoding

Codec 1

Codec 2

Beamr 4 (H.264)

Beamr 5 (H.265)

RAW video

RAW video

LibAVFilter (various filters for video and audio) - Applies effects

Beamr configuration files

Why use this plugin?

When used with Beamr 4, Beamr 5, and Beamr 5x, the Beamr FFmpeg plugin enables the following HEVC & H.264 coding capabilities within the FFmpeg framework:

- Support for dual-pass encoding.
- FFmpeg-based encoding from any FFmpeg-supported file format to a HEVC and H.264 elementary stream file or encoding that stream wrapped into a MP4/MPEG2-TS container.
- FFmpeg-based decoding from any container format with HEVC and H.264 elementary streams using the Beamr 4 and Beamr 5 decoders to uncompressed RAW video.
- Support for all features and settings/presets of Beamr 4, Beamr 5, and Beamr 5x.

Beamr benefits.

Beamr is the leading provider of content-adaptive encoding and optimization solutions that enable high quality, performance, and new levels of bitrate efficiency for MSOs, OTT content distributors, and video streaming platforms and services. With Beamr HEVC & H.264 encoding solutions, users get the highest video quality at the lowest possible bitrate, allowing video encoding operations to operate up to 6 times faster and create files that are 50% smaller for live and VOD workflows – both on-premise and in the cloud.

The Beamr FFmpeg plugin makes it easy for video streaming services to use our fully functional HEVC, H.264, and content-adaptive encoding technologies to power broadcast-quality live and on-demand workflows.