

# WingsVIOSO/RX

## FFMPEG via commandline

To encode raw content (picture sequences, uncompressed video streams, etc.) you can use the free video encoder FFMPEG (learn more here: <http://ffmpeg.org/>). It just has a commandline interface, which is - after a bit of learning - surprisingly efficient to use.

- Download a pre-configured build of FFMPEG for Windows here: <https://vioso.com/download/ffmpeg-vioso/>
- FFMPEG builds from the maintainer: <https://ffmpeg.zeranoe.com/builds/>
- Unzip anywhere

Running FFMPEG from the commandline:

```
path_to_ffmpeg_exe\ffmpeg.exe
```

General usage:

```
ffmpeg -h // display help
ffmpeg -formats | more // display supported video formats (paginated)
ffmpeg -codecs | more // display supported video codecs (paginated)
```

### Encoding Commands

```
-pix_fmt rgb24 //for RGB formats
-pix_fmt yuv420p //for YUV formats
-pix_fmt bgr24 //for BGR formats

-compression_algo raw //for uncompressed

-vf "scale=4096:2160" //scaling the resolution
"crop=3840:2160:0:0" //to cut the size

-framerate 60 //for fps (frames per second)

-vcodec libx264 //for H264 Codec
-vcodec libx265 //for H265 Codec
-vcodec prores_ks //for Prores
-vcodec hap -format hap //for HAP
-vcodec hap -format hap_q //for HAPQ

-chunks 4 //for hap: encoding can use 0-4 thr
```

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eads

```
-vcodec prores -profile:v 2 //Prores Profiles:
                               //0: ProRes422 (Proxy) - apco
                               //1: ProRes422 (LT) - apcs
                               //2: ProRes422 (Normal) - apcn
                               //3: ProRes422 (HQ)- apch

-qscale:v 10 //quality for prores 0-32 (9-13 good)
-crf 24 //value for the bitrate when using
H265 or H264 //CRF (Constant Rate Factory 0-51)
              //small value --> high bitrate (22-
26 is default)
-preset veryslow //slow presets => better compression
                //(veryslow,slow,fast,veryfast)

%05d.tif //for picture sequences (decimal placeholder)
) // (image_00001.tif = image_%05d.tif)
```

endings:

```
H265 = .mp4
H264 = .mp4
HAP = .mov
HAPQ = .mov
```

## Examples

TIFF --> DPX + scaling

```
ffmpeg -i "V:\Frames_8kx4k\Testvideo_8192x4302_%04d.tif" -pix_fmt rgb24 -vf "scale=4096:2160" "V:\DPX 4096x2160 8Bit 60fps\RAW_DEMO_4k_8Bit_%04d.dpx"
```

TIFF --> H264 420

```
ffmpeg -r 60 -i "V:\TIFF 4096x2160 16Bit 30fps\Testvideo_%05d.tif" -vcodec libx264 -r 60 -crf 26 -pix_fmt yuv420p "V:\H264 4096x2160 8Bit 60fps\Testvideo_4k_30fps.mp4"
```

PNG --> HAP

```
ffmpeg -r 60 -i "V:\4k_png\Testvideo_000%05d.png" -vcodec hap -format
```

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```
hap -chunks 8 -r 60 "V:\HAP 4096x2160 8Bit 60fps\Testvideo_4K_hap.mov"
```

```
TIFF --> Prores 444
```

```
ffmpeg -r 60 -i "V:\TIFF 4096x2160 8Bit 60fps\Testvideo_%05d.tif" -vcodec prores -c:v prores_ks -profile:v 3 -qscale:v 15 -pix_fmt yuv444p10le -vf "scale=1920:1080" -r 60 "V:\Testvideo_FHD_prores_444_HQ(3)_q15.mov"
```

```
TIFF --> TGA
```

```
ffmpeg -framerate 60 -i "V:\TIFF 4096x2160 8Bit 60fps\Testvideo_4K_8Bit_%05d.tif" -coder "raw" -pix_fmt bgr24 -vf "scale=1920:1080" "V:\Testvideo_FHD_8Bit_%05d.tga"
```

Split a 7680x2160 DPX sequence into two 3840x2160 parts:

CROP left Part:

```
ffmpeg -i "V:\Testvideo_%05d.dpx" -filter:v "crop=3840:2160:0:0" "V:\Testvideo_crop_left_%05d.dpx"
```

CROP right Part:

```
ffmpeg -i "V:\Testvideo_%05d.dpx" -filter:v "crop=3840:2160:3840:0" "V:\Testvideo_crop_right_%05d.dpx"
```

Split a 7680x2160 DPX sequence into two 3840x2160 parts:

CROP left Part:

```
ffmpeg -i "V:\Content\120fps Test\Komp 1_%05d.dpx" -filter:v "crop=3840:2160:0:0" "V:\Content\120fps Test\crop\Komp_1_crop_left_%05d.dpx"
```

CROP right Part:

```
ffmpeg -i "V:\Content\120fps Test\Komp 1_%05d.dpx" -filter:v "crop=3840:2160:3840:0" "V:\Content\120fps Test\crop\Komp_1_crop_right_%05d.dpx"
```

## Examples Fulldome

PNG --> HAP Domemaster 4K@30Hz (1 file)

```
ffmpeg -r 30 -i "V:\FRAMES_4K\Dome_30fps_%05d.png" -vcodec hap -format hap -r 30 "V:\ENC_4K\Dome_4K_30fps.mov"
```

PNG --> HAP\_Q Domemaster 4K@30Hz (1 file)

```
ffmpeg -r 30 -i "V:\FRAMES_4K\Dome_30fps_%05d.png" -vcodec hap -format
```

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```
hap_q -r 30 "V:\ENC_4K\Dome_4K_30fps-HAP_Q.mov"
```

PNG --> HEVC Domemaster 4K@30Hz (1 file)

```
ffmpeg -r 30 -i "V:\FRAMES_4K\Dome_30fps_%05d.png" -vcodec libx265 -crf 30 -pix_fmt yuv420p -r 30 "V:\ENC_4K\Dome_4K_30fps-HEVC.mp4"
```

PNG --> HAP Domemaster 6K@60Hz (2 files: top and bottom)

Top part

```
ffmpeg -r 60 -i "V:\FRAMES_6K\Dome_60fps_%05d.png" -filter:v "crop=600:0:3000:0:0" -vcodec hap -format hap -r 60 "V:\ENC_4K\Dome_6K_60fps_TOP.mov"
```

Bottom part

```
ffmpeg -r 60 -i "V:\FRAMES_6K\Dome_60fps_%05d.png" -filter:v "crop=600:0:3000:0:3000" -vcodec hap -format hap -r 60 "V:\ENC_4K\Dome_6K_60fps_BOT.mov"
```

Unique solution ID: #1065

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