

YUV Convert

The Reference Tool for Video Conversion to Uncompressed YUV Formats

Product information

Product

- Software
- Hardware ⁽¹⁾

Applications

- Video conversion to uncompressed YUV formats
- Video conversion to AVI files containing uncompressed video
- Video processing
- YUV components visualization
- Video bitrate measurement
- Video quality measurement ⁽²⁾

Input types

- File
- IP streaming ⁽³⁾
- Capture card, device ⁽³⁾

Input formats

- Compressed: MPEG-2, H.264...
- Uncompressed
- HDR images
- Virtually any other common format

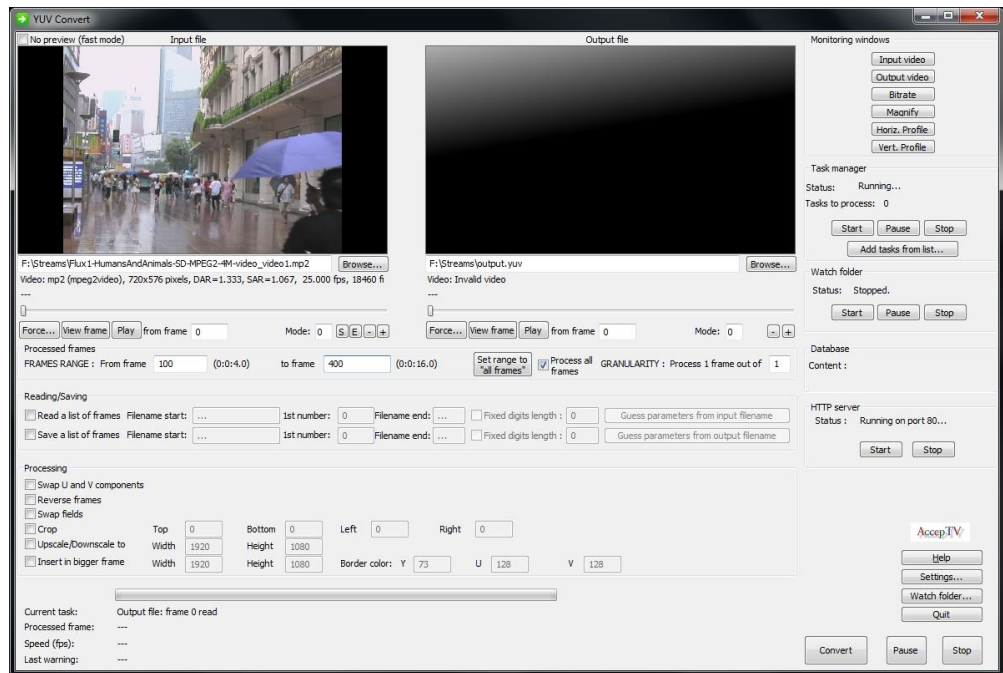
Supported YUV formats

- 8-bit/component
- 10-bit/component
- YUV 4:2:0 (YV12)
- YUV 4:2:2 (YV16)
- YUV 4:2:2 (UYVY)
- YUV 4:2:2 (YUYV)
- YUV 4:4:4
- other formats: just ask us!

⁽¹⁾ Hardware (PC) may be supplied as an option

⁽²⁾ Please see our other product Video Quality Analyzer

⁽³⁾ Please see our other product ProcessX



Most of the time, video files are compressed. This way, video files use less storage space and are easier to send and copy. But when you need to access the pixels values, you have to decompress the video frames and the problems begin.

Indeed, pixels values will depend on the used decoder, making them different from a machine to another.

More, decompressed video can use different pixels values representations (4:2:0, 4:2:2, 4:4:4) and, once decompressed, these data are often stored in video files with headers, making more difficult to access pixel values.

Now, things are simpler: YUV Convert is here.

YUV Convert enables to:

- Convert video files from any format to uncompressed YUV formats (4:2:0, 4:2:2 or 4:4:4)
- Convert from video files or from lists of images, convert to video files or to lists of images
- Process video during conversion (reverse the frames order, fields swapping, cropping, upscaling, downscaling, insertion in a bigger video)
- Convert a single file or list of files

And since Video Quality Analyzer is not dependent on specific hardware, you can install it on any Windows™ PC. You can even run it on a laptop!

YUV Convert is the only tool able to convert so many file formats to YUV formats and able to convert lists of images to videos (or videos to lists of images).

YUV Convert supports several YUV formats, for both 8-bit/component videos and 10-bit/component videos:

- YUV 4:2:0 (YV12)
- YUV 4:2:2 (YV16)
- YUV 4:2:2 (UYVY)
- YUV 4:2:2 (YUYV)
- YUV 4:4:4

YUV Convert also supports the most common High-Dynamic Range (HDR) image formats: OpenEXR (*.exr) and RGBE (*.hdr).

During the conversion, several video processing techniques can be applied (reverse the order of frames, swap top and bottom fields, cropping, downscaling, upscaling, inserting in a bigger frame).

YUV Convert can also import or export lists of images (YUV or BMP). It can save raw data (.yuv) or encapsulate uncompressed YUV video into an AVI (.avi) or MOV (.mov) container.

At last, a magnifying glass enables to inspect the video frames, to see the YUV values for each pixel and to compare two videos.

All these features explain why YUV Convert is a reference tool for uncompressed YUV files

Key features

Video bitrate measurement

During the conversion, YUV Convert measures the instant video bitrate and the mean bitrate. The bitrate curve can then be viewed locally and in the web interface.

Built-in database and integrated web server

YUV Convert includes a database and starts its own web server.

- The database is used to save information about the processed files and the bitrate values.
- The web server enables to view the processed files information, view/cancel the tasks being processed and draw bitrate curves.

Y, U and V components visualization

YUV Convert enables to see the horizontal and vertical profiles of Y, U and V components, of one or two videos at the same time. The magnifying glass enables to zoom in the image and view the Y, U and V values for each pixel.

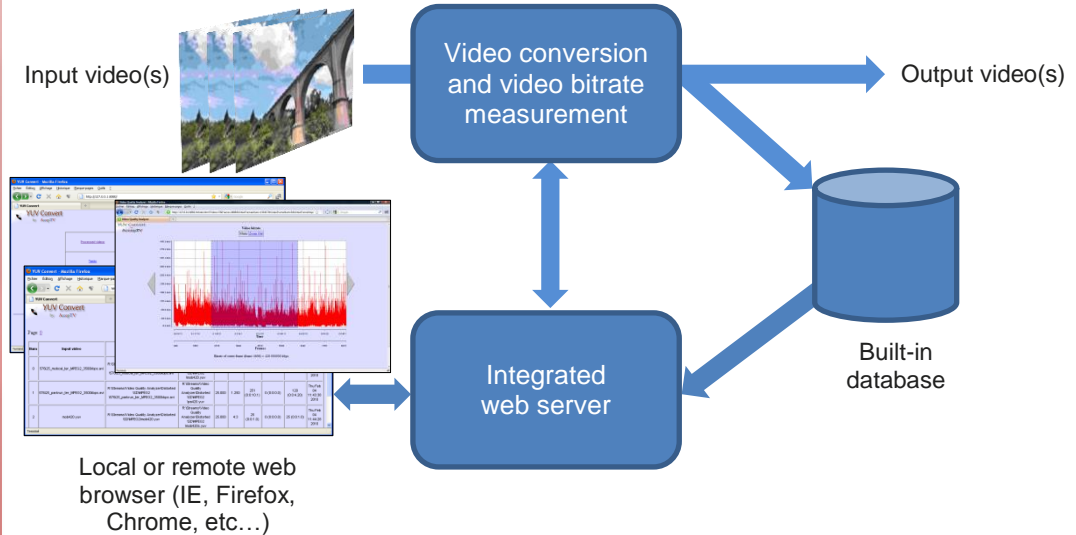
Many other features

YUV Convert includes many other features like a watch folder, scripts loading, horizontal and vertical signals profiles visualization, magnifying glass, etc.

Ask for a free evaluation version now!

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Principle



Features

Input videos

Compatible with all common formats and containers: MPEG-1, MPEG-2, MPEG-4, H.264, uncompressed YUV (4:2:0, 4:2:2, 4:4:4), AVI, TS (Transport Stream), PS (Program Stream), MOV, WMV, etc...

Compatible with all frame rates: 4:3, 16:9, 1.85, 2.21, 2.35, custom ...

Compatible with all resolutions: SD, 720p, 1080i, 1080p, custom...

Compatible with all durations from 1 frame to several hours

Compatible with CBR and VBR encoding

Can import list of YUV images

Can import list of BMP images

Supports HDR images in OpenEXR (*.exr) and RGBE (*.hdr) formats

Supports 8-bit/component and 10-bit/component video

User-chosen audio/video decoders: integrated decoders or external (DirectShow) filters

Processing

Reverse the frames order

Swap fields

Cropping

Upscaling or Downscaling (using the nearest neighbor or Lanczos interpolation)

Insertion in a bigger video

Output videos

YUV 4:2:0 (YV12)

YUV 4:2:2 (YV16)

YUV 4:2:2 (UYVY)

YUV 4:2:2 (UYVU)

YUV 4:4:4

List of YUV images

List of BMP images

8-bit/component video in AVI file

10-bit/component video in MOV file

Monitoring windows

Input video

Output video

Magnifying glass: display the YUV values of each pixel for the input and output videos (side by side)

Horizontal and vertical Y, U and V signals profiles

Extra

Integrated HTTP server for distant results consultation and built-in database to store results

Integrated video player

Watch Folder: automatically convert each new video in a folder (and its subfolders)

Send conversion reports by email

Scripts loading



Perceived Video Quality Metrics

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