Video Quality Analyzer

Full Reference Perceived Video Quality Measurement Solution

Product information

Product

☑ Software
☐ Hardware (1)

Metrics type

☑ Full reference
☐ No reference (2)
☐ Parametric (2)
☐ Hybrid (2)
☑ Skew (lip-sync offset)
☑ MSE & PSNR
☑ VMAF

Input types

☑ File
☐ IP streaming (2)
☐ Capture card, device (2)

Input formats

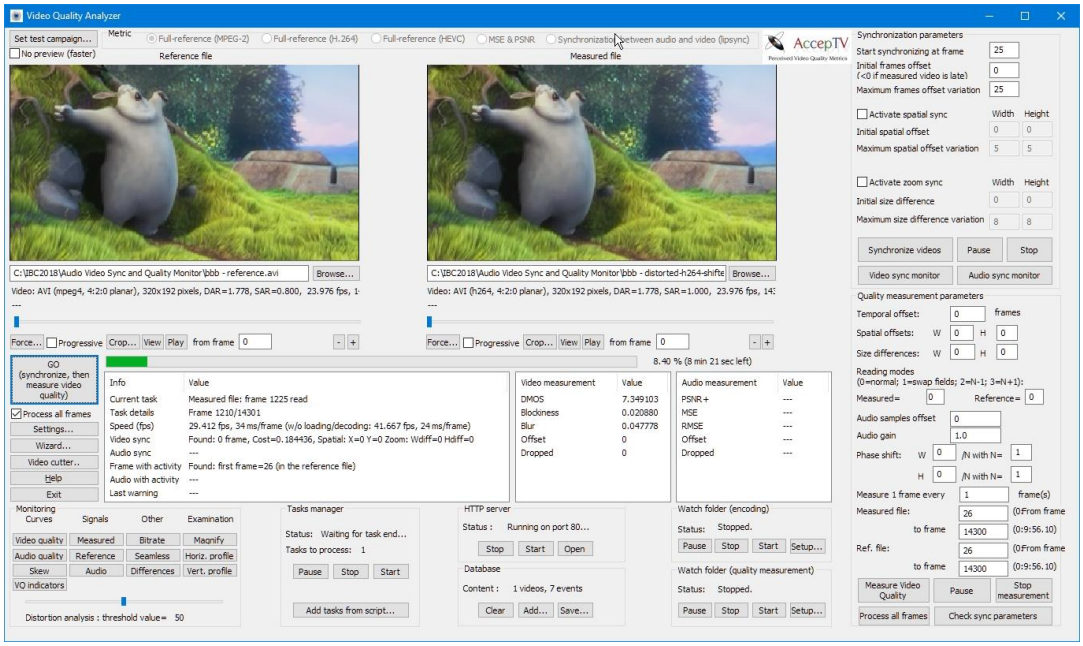
☑ MPEG-2
☑ H.264
☑ HEVC
☑ Uncompressed
☑ Other formats

Applications

☑ Video encoders benchmarking
☑ Video encoders comparison
☑ File-based encoding monitoring
☐ Live programs monitoring (2)
☑ Optimal bitrate determination
☑ Video processing optimization
☑ Audio video files encoding & transcoding
☑ Quality-driven audio video files encoding & transcoding

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

(2) Please see our other products, like Video Quality Monitor and Multi Audio/Video Monitor



Because your customers expect the highest quality from your products, because your competitors improve the quality of their products, quality is crucial for you.

But optimizing perceived video quality requires measuring it, analyzing it.

Until then, measuring perceived video quality was a difficult task: important number of videos to process, lack of measurement solutions, variety of video formats, limited tools, hardware requirements...

Luckily, Video Quality Analyzer is here.

Video Quality Analyzer (VQA) is a powerful software solution to measure video quality as perceived by end-users.

Video Quality Analyzer is the most precise tool to:

- benchmark encoders or firmwares and find the best one,
- define optimal bitrates,
- optimize video processing parameters,
- monitor the quality of an encoding process,
- encode audio video files by choosing quality (instead of choosing bitrate)

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

VQA quickly provides accurate, detailed and repeatable measurements.

VQA uses video quality measurement technologies ("metrics") that extracts visual features which are similar to the ones used by the Human Visual System.

VQA also computes **blockiness, blur, contrast and flatness** for both the reference and the measured videos.

VQA computes video quality using DMOS (Differential Mean Opinion Score) values. A DMOS value indicates the quality loss of the tested video, compared to its reference video. The produced DMOS values are highly correlated to human judgments: the linear correlation coefficient between computed DMOS and subjective DMOS (given by human observers during subjective video quality assessment tests in normalized viewing conditions) is greater than 0.924 (the maximum theoretical value being 1).

Moreover, **VQA can emphasize the zones which are the most distorted** and thanks to our patented technology, **VQA also generates quality scores by content class (contours, texture, smooth areas…)** so that you know which content types are the most critical! Now you have the tool to select and finely tune the best video equipment.

VQA also enables to measure the skew (or lip-sync offset) which indicates how audio and video signals are synchronized.

At last, **VQA enables to automatically encode audio video files** with the most common containers (TS, MP4, AVI, etc.) and the most popular codecs (H.264, MPEG-2, etc.). And **by measuring perceived video quality, VQA can even automatically determine the optimal bitrate to reach the quality level you target!**

Take the lead in the race for quality

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AccepTV
Perceived Video Quality Metrics

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Key features

Perceived video quality measurement and bitrate measurement

Video Quality Analyzer measures the perceived video quality on a scale from 0 to 100. It also measures the bitrate of any frame (instant bitrate) and the mean bitrate.

Integrated web server and database

Video Quality Analyzer saves all measurement data in an integrated database. It also includes its own web server so that you can remotely:

- consult the results from the database
- display interactive quality curves and "Quality vs Bitrate" curves
- generate quantitative and detailed video quality analysis reports

Audio support

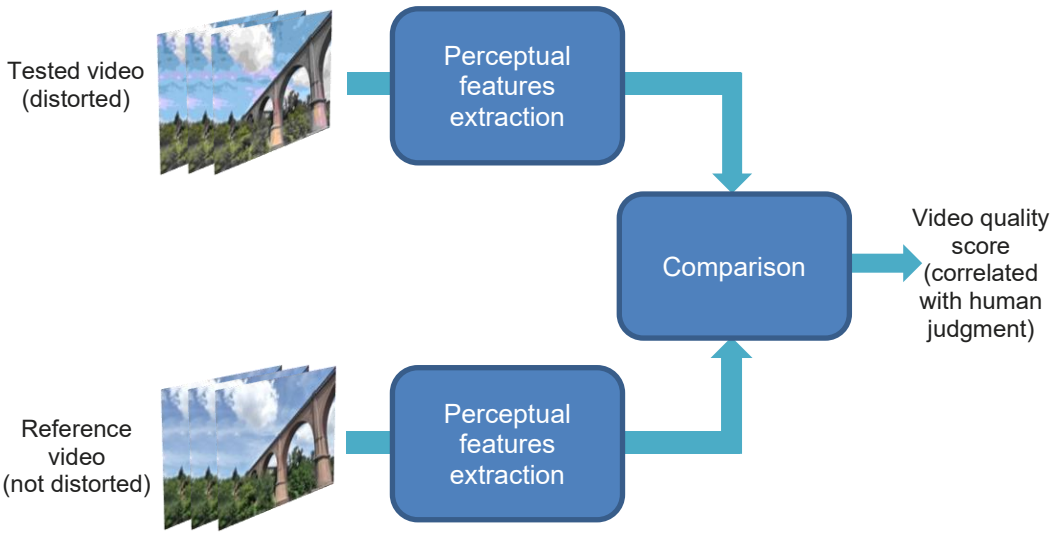
Video Quality Analyzer also measures audio quality and audio bitrate for stereo and mono.

Many other features

Video Quality Analyzer also includes many other features like a watch folder, automation features, « video cutter », command line usage, horizontal and vertical signals profiles visualization, magnifying glass, etc.

Ask for a free evaluation version now!

Principle



Features

Input videos

Compatible with all common formats: MPEG-1, MPEG-2, MPEG-4, H.264, uncompressed YUV (4:2:0, 4:2:2, 4:4:4), AVI, TS, DPX, Motion JPEG2000, MOV, WMV ...
Compatible with all frame rates: 4:3, 16:9, 1.85, 2.21, 2.35, custom …
Compatible with all durations from 5 seconds to several hours
Compatible with CBR and VBR encoding
User-chosen audio/video decoders: integrated decoders or external (DirectShow) filters

Synchronization (alignment)

Measured video and reference video can have different sizes and/or different frame rates and/or black bands
Temporal and spatial (translation, zoom, cropping) synchronization of the measured video with its reference video
Synchronization adjustment during video quality measurement (if frames have been lost)
Sub-pixel synchronization, Lanczos rescaling

Measurement

Human Vision modeling
Measurement of blockiness, blur, contrast and flatness
Three dedicated video quality metrics for MPEG-2, H.264 and HEVC
VMAF video quality metric
PSNR-HVS, PSNR-HVS-M, VIF, SSIM and MS-SSIM metrics
MSE & PSNR video quality metrics
MSE, RMSE & PSNR (without of with gain compensation) audio quality metrics
Video quality measurement: computation of DMOS (Differential Mean Opinion Score) indicating the quality loss of the tested video compared to its reference video.
Audio quality measurement: coarse errors detection (silence, important distortions)
Instant video bitrate measurement (for each frame)
Mean video bitrate measurement (for the whole video)
Skew measurement, video time offset, audio time offset

Results

Values and curves: **video quality (DMOS), blockiness, blur, contrast, flatness, audio quality, video bitrate, audio bitrate, video delay, audio delay, skew, VMAF**
"Quality vs. Bitrate" curves generation (to find the optimal bitrate)
Skew curves, skew warnings and errors based on user-defined thresholds
Local analysis of video quality: the most distorted zones can be emphasized
Exclusive (patented) generation of quality scores by content class (contours, textures, homogeneous zones…) in a video
Useful interface: reference video (A), measured video (B), distortion video (A-B), seamless side by side, quality curves, bitrate curve, magnifying glass, audio waveform
Automatic reports generation (TXT, CSV, HTML)

Extra

Integrated HTTP server for distant results consultation and built-in database to store results
Automatic audio video encoding with the most common containers (MP4, AVI, TS, PS, etc.), video codecs (MPEG-2, H.264, HEVC, etc.) and audio codecs (AAC, MP3, etc.) using a watch folder
Quality-driven audio video encoding: choose the quality, VQA determines the optimal bitrate!
Classical audio video encoding: just select the bitrate!
Automation: command line usage and script loading
Watch Folder to automatically measure the quality of new video files in a folder (and its subfolders)
Send measurement reports/alerts by email
Real time operating mode

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