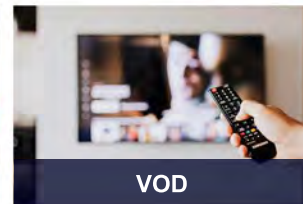# VisualOn Optimizer

AI-Enhanced Universal CAE Solution for Video Streaming

VISUALON OPTIMIZER

VisualOn Optimizer is the Universal Content-Adaptive Encoding solution for FFmpeg-based video streaming. The AI-enhanced solution continuously analyzes content in real-time to determine the optimal transcoder settings to achieve much lower bitrate and outstanding video quality. Using Optimizer, you can reduce bitrates by an average of 40% and up to 80% to improve bandwidth efficiency, storage costs, service scalability, user experience, and energy consumption. At the same bitrate, it also improves visual quality as bits are more appropriately allocated to where they are needed.
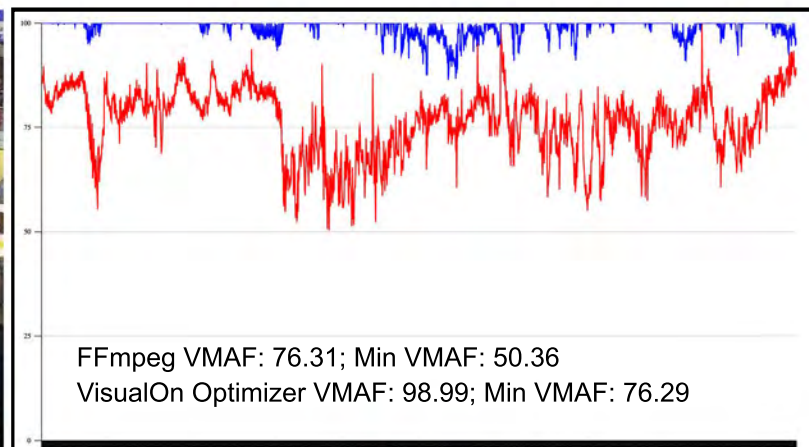
- **Dynamic Optimization**
- **QoE Improvement**
- **Easy Integration**
- **Efficient Implementation**
- **Transcoder Agnostic**

LIVE

VOD

MOBILE DEVICES

AUTOMOTIVE VIDEO RECORDING

CLOUD ENCODING

SECURITY & SURVEILLANCE

VIDEO QUALITY COMPARISON

FFmpeg VMAF: 76.31; Min VMAF: 50.36
VisualOn Optimizer VMAF: 98.99; Min VMAF: 76.29

1080p Video Quality Comparison
Left FFmpeg - Right VisualOn Optimizer

1080p Video Quality VMAF Score Comparison under Same Bitrate
Red FFmpeg - Blue VisualOn Optimizer

VIDEO STREAMING SOLUTION

VisualOn's Native+ Players - 100% API-Compliant with Native Players
- ExoPlayer+ for Android – fully compliant with ExoPlayer.
- AVPlayer+ for iOS & tvOS – fully API compliant with AVPlayer.
- HTML5Player+ for browsers – supports HLS.js, DASH.js, and video.js APIs. HTML5+ delivers high-quality playback with HEVC decoding and 4K support, plus low-latency live video through our patented bitrate adaptation solution.
- VisualOn provides quality assurance, maintenance & support, advanced features and customized development.

OSMP+ VisualOn's All-in-One Playback Solution
- Delivers uniform UX across multiple platforms, including Android (Android TV, Chromecast), iOS, tvOS, Windows (Xbox), Linux, and more.
- Based on proprietary technology, it's a fully-customizable, future-proof solution not constrained by the platform limitations.
- It offers a rich set of advanced features, such as ultra low latency, multistream sync, watch together, etc.

ADVANCED FEATURES

AdFlow
Enables seamless ad playback and tracking for accurate revenue reporting, ensuring smooth content-and-ad transition to prevent viewer abandonment while easily enforcing business logic playback rules.

AdFusion
VisualOn AdFusion is a powerful and flexible ad management tool that seamlessly integrates with any SDK, offering comprehensive ad insertion, playback, and reporting solutions. It supports server-side ad insertion, simplifies ad management, and ensures compatibility with industry standards and popular platforms.

VisualOn WatchParty
- Allow viewers to enjoy real-time text, audio, and video chat while watching online Live and VOD with friends and family.
- WatchParty ShowTime breaks geographic barriers to broadcasting, enabling operators to offer audiences an optimized live dubbing experience via digital, social, mobile, and OTT platforms.

5G MultiStream Sync
- Multi-Angle on Single Screen: View live events with ultra-low latency and switch between different camera angles.
- Multi-Device Sync: Viewers enjoy ultra-low latency live events with a second screen for different camera angles, enabling multiple streams to be synchronized on one device or several.
- Multi-Angle with Remote Control: Features include dedicated video remote control, angle selection, software decoder support for broader device compatibility, and low-latency performance.
- Multi-Angle with Multi-Location: Multi-location synchronized playback, multi-angle viewing with multiple streams.

REMOTE LAB
A real-time full frame rate tool for remote development, testing and debugging. It brings together disparate teams, devices, and contents to test, debug and fix streaming issues.

DEMOS	5G Multi-Stream	Remote Lab	Watch Together	Ad Insertion	Device Fragmentation
Optimizer CAE Solution	Thumbnail Scrubbing	Picture in picture 4K	Video Enhancement for Low Backlight	External Subtitle	AV Support