

The Qumu AWS Live Encoder

High Performance Video Processing for Live Streaming



Whether you're broadcasting a CEO event, new product introduction or crisis communication, the Qumu AWS Live Encoder makes live, enterprise-wide video communication efficient, reliable and secure.

The Qumu Live Encoder (QLE) from AWS is a video processing engine that provides real-time video and audio encoding for live streaming via the Qumu enterprise video platform. Powered by AWS Elemental Live, the QLE performs simultaneous processing of multiple video outputs, delivering the high-quality, high-efficiency performance required for formatting live video for any device. The QLE is designed to integrate seamlessly into the Qumu delivery workflow, with the flexibility to evolve as technology requires. The QLE provides flexible input options from HD-SDI and HDMI inputs to both local file and HLS or MPEG Transport Stream network inputs.

The QLE offers delivery of content via Apple HTTP Live Streaming (HLS), Microsoft Smooth Streaming, or H.264 via UDP/TS live streams

to the Video Control Center (VCC) and automated ingest of archives for video-on-demand viewing.

The Linux-based system can also be controlled through an intuitive web interface to set up and monitor the QLE, eliminating the need to use external remote control tools. The QLE allows users to configure broadcasts that can publish to both internal (i.e., Qumu VideoNet Edge) and external (i.e., Amazon CloudFront, Akamai) distribution points simultaneously.

In addition, for customers requiring live multitrack audio for live audio translations of broadcasts, Qumu also supports live simultaneous multi-audio tracks when sourced from QLE in HLS or UDP/TS formats.

Overview

HIGH PERFORMANCE

Deliver content via Apple HLS, RTMP, Microsoft Smooth Streaming, or transport streams. Alternatively, create mezzanine deliverables for wrapping with separate packages to reduce network bandwidth.

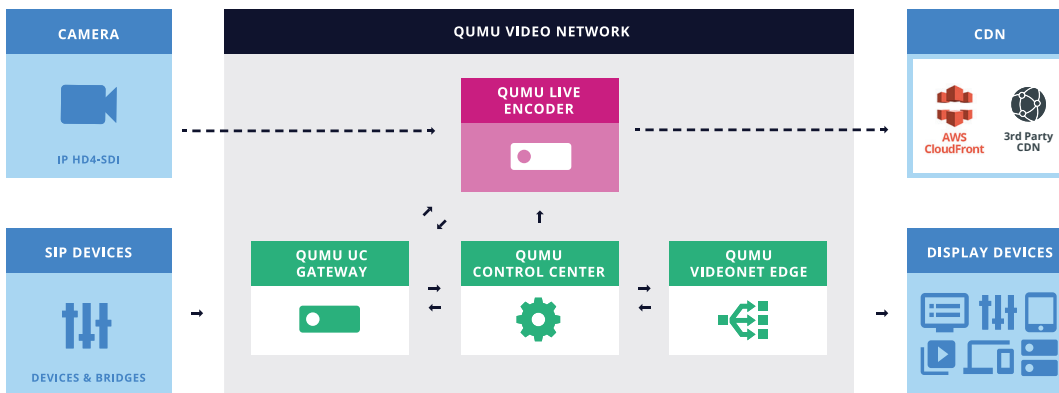
VERSATILE DEPLOYMENT

Control the Linux-based system through an intuitive web interface or REST / XML APIs for quick and simple integration into existing workflows. Unified control and management reduces setup time, simplifies maintenance tasks and allows for centralized upgrades of multiple deployments.

SEAMLESS CLOUD INTEGRATION

Expand video processing as needed to flex with variable demand. Integration with AWS Elemental MediaLive replicates the profiles, capabilities and formats used on-premises so that video outputs are identical regardless of where they are processed.

Live Workflow



Want to learn more? Contact us.

Solution Brief

Qumu Live Encoder



Why Qumu Live Encoder?

ADVANCED VIDEO PROCESSING

Advanced image processing such as anti-alias scaling, MPEG-2 deblocking and motion adaptive deinterlacing improve performance and deliver professional quality video output.

REAL-TIME ARCHIVING

Start and stop control of archive streams enables instant creation of high-quality VOD files, saving editing cycles and lowering the cost of content delivery.

PRODUCE MULTIPLE OUTPUTS

Simultaneously output a mix of streams at different resolutions and bitrates for multiple target platforms. Wrap streams in popular formats or retain content in a base container for downstream packaging.

Specifications

LIVE INPUTS

SPTS, MPTS over UDP/IP and RTP/IP
Packaged network inputs: HLS Video codecs

- H.264 up to 4:2:0
- H.265 up to 4:2:0*
- MPEG-2
- Apple® ProRes
- RAW

Audio codecs

- AC-3 (Dolby Digital)
- EAC-3 (Dolby Digital Plus)*
- Dolby E*
- AAC

FILE INPUTS

Containers: MXF, QuickTime, MPEG-4
Packaged files: HLS, Adobe Flash Video codecs

- Apple® ProRes, Apple® ProRes XQ
- DivXXvid
- DV/DVCPRO HD
- H.261-H.265*
- JPEG-2000
- MPEG-1/2/3 part
- Others
- Audio codecs
- AC-3 (Dolby Digital)
- EAC-3 (Dolby Digital Plus)*
- Dolby E*
- MPEG-1 L2/L3, MPEG-2 L2
- WMA/2
- AAC
- MPEG
- Others

OUTPUT FORMATS

Video

- H.264 (Baseline, Main, High up to 4:2:0)
- H.265 (Main, Main 10, up to 4:2:0)*
- Frame capture to JPEG (thumbnail creation)
- MPEG-2
- Uncompressed
- RAW

Audio

- AAC-LC/HEV1/HEV2/ (MPEG-2/4, LATM/LOAS)
- Uncompressed WAV/AIFF
- AC-3 (Dolby Digital)*, AC-3 passthrough
- Dolby E* (passthrough)
- AAC
- MPEG-1 L2
- Audio only support

OUTPUT CONTAINERS

Live Streaming Outputs

- Adobe Media Server (F4F)
- Microsoft Smooth Streaming (ISMV)
- Apple HTTP Adaptive Streaming (HLS)
- MPEG-2 Part 1, Systems, Cable Labs compliant (MPG-TS)
- MPEG DASH (ISO/BMFF)
- Adobe RTMP Streaming
- Real-time Streaming Protocol (RTSP/RTP)
- SPTS/MPTS over UDP/IP and RTP/IP

File Outputs

- Microsoft Windows Media (WMV/ASF)
- Apple QuickTime and ProRes (MOV)
- Sony XDCAM MXF (XDCAM)
- RAW YUV or RGB formats (Uncompressed)
- Adobe Media Server (F4V)
- MPEG-4 Part 10 (MP4)

VIDEO PROCESSING

- Adaptive Quantization
- AFD-Driven Output Scaling
- Anti-Aliasing Scaler
- Deblocking Filter
- Frame Rate Interpolation
- Inverse Telecine Support
- Lanczos Scaling
- Logo Insertion
- Look Ahead Rate Control
- Motion Adaptive Deinterlacing
- MPEG-2 Error Concealment
- Noise Reduction
- Scene Change Detection

OTHER FEATURES

- Ad Avail Blanking & Black-Out Capability
- Audio Channel Mixing
- Audio Loudness Management (CALM Compliant)
- Burned-In Timecode
- Caption Extraction and Passthrough
- Comprehensive Encryption DRM Support
- Forensic Watermarking
- Integrated CDN Support
- Multiple Audio Tracks (Languages, Surround, SAP)
- Nielson ID3 Support
- Open Caption Support
- SCTE-35 and SCTE-104 Support
- Support for Auxiliary Data (EBIF/KLV/V-Chip/CGMS-A)

Typical Use Cases for Global 2000 Firms

THE NEEDS

- Internal or external product and solution training
- Live broadcasting of shareholder meetings, CEO messages and other corporate communications
- New product introductions, press rollouts and live streaming from trade events

THE SOLUTION

- Deployed series of Qumu Live Encoders for distribution across VideoNet Edge and Amazon CloudFront
- Distributed to OTT devices, computers, mobile devices with ABR suite by employing dynamic encoding
- Integration with media asset management (MAM), digital asset management (DAM), transcode, workflow, and digital rights management (DRM) solutions