

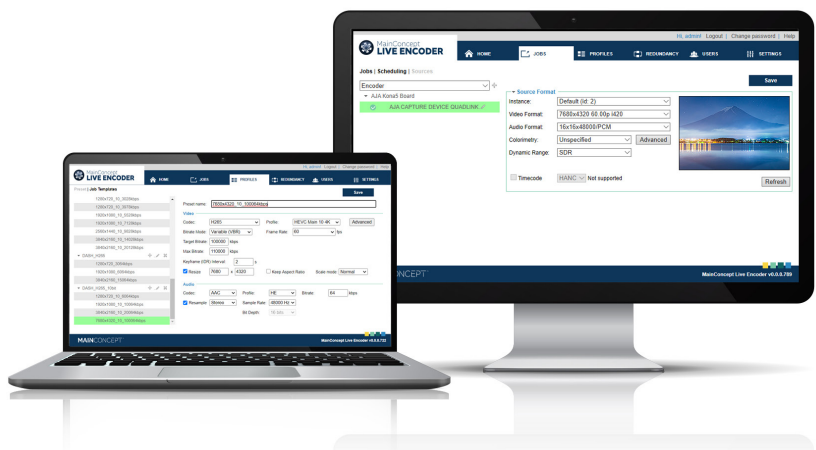
# MainConcept Live Encoder

Real-Time Video Encoding for Every Screen Size

Live streaming at a professional level doesn't need to be complicated. MainConcept® Live Encoder is a powerful all-in-one encoding engine designed to simplify common broadcast and OTT video workflows. With renowned MainConcept HEVC and AVC codecs built in, our intuitive user-interface allows you to package content for multiscreen delivery, using common input sources, in real-time.

With MainConcept Live Encoder, you can set up a live workflow to ingest, prepare, and stream audio-visual content that is compatible with every type of consumer device. It doesn't matter if you are delivering video directly to a CDN or to an online video platform via RTMP, MainConcept Live Encoder ensures your live video is delivered reliably and in the highest possible quality.

MainConcept Live Encoder includes a management layer for monitoring and controlling the encoder. It allows flexible management through an intuitive web interface or using a REST API for integration in existing workflows.



## KEY FEATURES

- Proven performance, used for over 50,000 live events every year
- Apple HLS and MPEG-DASH compliant
- Common SDI and IP input sources
- Real-time multiscreen encoding, with packaging and playlist generation
- Live archiving to disk or Amazon S3
- Up to 8K 10-bit resolution, with HDR-10 support
- Hybrid hardware & software encoding modes
- Supported on Windows or Linux



**DISTANCE LEARNING**



**CULTURAL EVENTS**



**LIVE SPORTS**



**GOVERNMENT BROADCASTS**



**ENTERTAINMENT**

## FEATURES

### PROVEN TECHNOLOGY

Built on a platform with 50,000 live events per year, as well as streaming over 300 live linear channels 24/7.

### LIVE ADAPTIVE BITRATE STREAMING TO MPEG-DASH & APPLE HLS

Live encoding to Apple HLS, DASH-264 (8-bit) or DASH-265 (8-bit/10-bit) in compliant streams in up to 8K resolution, including packaging as well as manifest and playlist generation.

### HYBRID HARDWARE AND SOFTWARE ACCELERATION MODES

Get the best of both HEVC software and hardware encoding with Hybrid GPU, combining advanced MainConcept software encoding with powerful NVIDIA NVENC technology.

### BUILT-IN VIDEO AND AUDIO PROCESSING

Encode content to fit specific parameters, using a range of processing tools such as scaling, cropping, framerate conversion, deinterlacing, logo insertion, and audio channel mapping.

### PARALLEL MPEG-DASH & APPLE HLS LAYERS PACKAGING

A single job for encoding different quality layers and resolutions can be packaged in parallel for both MPEG-DASH and Apple HLS, including MPD file and playlist generation.

### COMMON INPUT & OUTPUT OPTIONS

Supports SDI and IP network streams input via UDP (MPEG-2/H.264 in MPEG TS), RTMP and HTTP. Encoding to IP streams using RTMP (in MP4), RTP, HTTP and UDP (in TS) for OTT delivery. Live streams can also be saved in AVC/H.264 and HEVC/H.265 as MP4 files for archiving.

### HIGH DYNAMIC RANGE

Signaling Hybrid Log Gamma (ITU-R BT.2100-1), PQ-10 (BT.2100 / SMPTE ST 2084) and HDR-10 (SMPTE ST.2086) encoding in HD, 4K, and 8K for both HEVC and AVC.

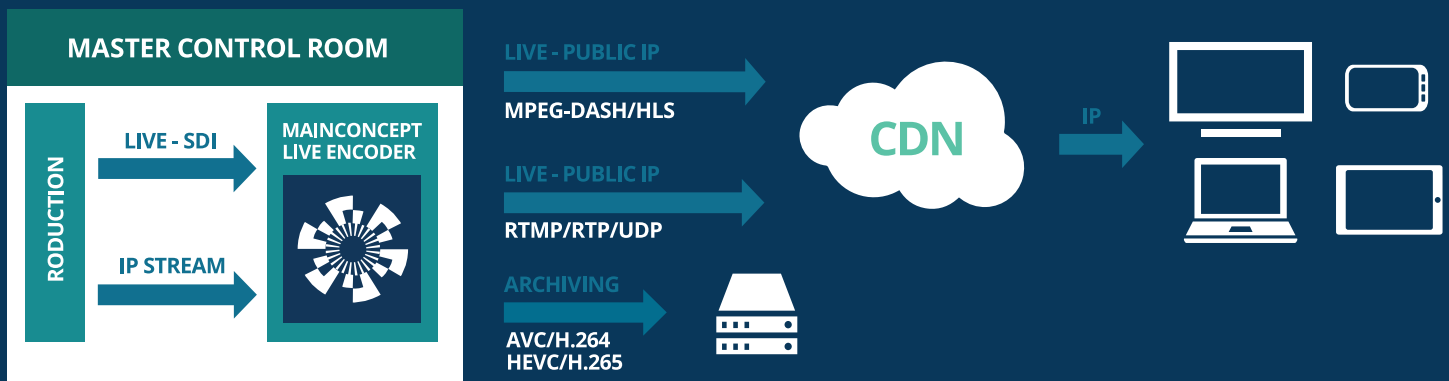
### FLEXIBLE DEPLOYMENT VIA WEB UI & REST API

The intuitive web-based interface offers easy configuration and administration with full access to all available presets and output formats. The XML-based public REST API provides quick and simple integration into any existing workflows for external control of the distribution encoder.

### REDUNDANCY & FAILOVER MANAGEMENT

For redundancy handling, MainConcept Live Encoder offers failover scenarios to provide uninterrupted service and automated channel recovery in case of an issue, outage or hardware failure on the encoding node, with user-defined 1+1 and N+M redundancy options.

## REAL-TIME WORKFLOW



## PRODUCT SPECS

### INPUT

- SDI capturing
- IP streams: UDP (MPEG-2/H.264 in MPEG TS), HTTP, RTMP, authenticated RTSP (in TS)
- Hardware AVC/H.264 and HEVC/H.265 decoding for IP ingest using Intel's Quick Sync Video technology for dedicated Intel Core Processors
- Optimized low-latency streaming
- Video: AVC/H.264, HEVC/H.265, MPEG-2, VC-1
- Audio: AAC, MPEG Audio Layer 1/2, MP3

### ENCODING

- Live encoding to HLS (AVC/AAC) up to 1080p (8-bit), incl. playlist and packaging
- Live encoding to HLS (HEVC/AAC) up to 8K (8-bit/10-bit), incl. playlist and packaging
- Live encoding to DASH-264 (AVC/AAC) up to 1080p (8-bit), incl. MPD and packaging
- Live encoding to DASH-265 (HEVC/AAC) up to 8K (8-bit/10-bit), incl. MPD and packaging
- Parallel packaging of MPEG-DASH and HLS
- Simultaneous encoding of 8 MPEG-DASH or HLS quality layers

### PROCESSING

- HDR-10 passthrough
- Closed Caption (EIA-608 & EIA-708)

- Ad-Insertion (SCTE-35 & SCTE-104)
- Logo insertion
- Slate insertion for lost signals
- Loudness normalization (CALM-Act / EBU R128)
- Video / Audio Processing Tools
- Deinterlacing, framerate conversion, scaling
- Channel mapping

### OUTPUT

- Archive live streams to disk as MP4, or to Amazon S3 file storage
- IP streams: RTMP, UDP, RTP, RTSP, HTTP
- CDN Support: Akamai, Amazon CloudFront
- Apple HLS AES-128 common encryption

### CONFIGURATION

- User Rights Management for administration and monitoring
- REST API
- SNMP Traps API
- Redundancy Management (1+1, N+M)
- Combined scheduler for encoding and publishing

## SYSTEM SPECS

[click here >>](#)