MAINCONCEPT LIVE ENCODER
Real-Time Video Encoding for Every Screen Size

Live streaming at a professional level doesn’t have to be complicated. MainConcept® Live Encoder is a powerful all-in-one encoding engine that simplifies 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 realtime. In addition to media, broadcasting and entertainment, the MainConcept Live Encoder is widely used for distance learning and to deliver live sporting events.

COMPATIBILITY & SIMPLICITY BUILT IN
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 content is delivered reliably with 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.

PROVEN, RELIABLE TECHNOLOGY
MainConcept Live Encoder has been proven at scale to handle 50K live events per year and stream 300+ live linear channels 24/7. MainConcept Live Encoder offers failover scenarios to provide uninterrupted service and automated channel recovery with user-defined 1+1 and N+M redundancy options.

HARDWARE RECOMMENDATIONS

AVC/H.264 HD
- 2x Intel Xeon E5-2640v3 2.6 GHz (8 cores/16 threads per CPU), 20M Cache, 8.00 GT/s QPI, Turbo, HT, 8C/16T (90W) Max Mem 1866MHz
- 64 GB RDIMM, 2133MT/s, Dual Rank, x4 Data Width
- Deltacast Delta-3G-elp-d 8c (Windows), AJA Kona 4, AJA Kona 5 or Blackmagic Design DeckLink Duo SDI capture board

AVC OR HEVC 4K
- 2x Intel Xeon E5-2699v4 2.2 GHz (22-cores/44 threads per CPU), 55M Cache (115W)
- 64 GB RDIMM, 2400 MT/s, Dual Rank, x8 Data Width
- Deltacast Delta-3G-elp-d 8c (Windows), Blackmagic Design DeckLink 4K, AJA Kona 4 SDI capture board

HEVC 8K
- 2x Intel Xeon Gold 6230 (20 cores/40 threads per CPU) 2.1 GHz, 27.5M Cache, HT, 115W, Max Mem 2933 MHz
- 128 GB DDR4-2933 RAM
- 3x GPUs: 1x NVIDIA RTX 2070, 2x NVIDIA RTX 2070 SUPER boards
- AJA Kona 5 SDI, Blackmagic Design DeckLink 8K Pro capture board

HEVC 8K IN AWS EC2
- AWS EC2 g4dn.12xlarge instance (48 CPUs)
- 4 GPUs (NVIDIA T4)
- 192 GB RAM
- 3 Layers: 8K, 4K, 1080p

50K+ LIVE EVENTS YEARLY COUNT ON LIVE ENCODER

SIMPLIFY BROADCAST & OTT VIDEO WORKFLOWS
Intuitive interface for real-time multiscreen encoding, packaging and playlist generation

FLEXIBLE DEPLOYMENT VIA WEB UI & REST API
XML-based public REST API provides easy integration into existing workflows

LIVE ADAPTIVE BITRATE STREAMING
Live encoding to Apple HLS, DASH-264 (8-bit) or DASH-265 (8-bit/10-bit) compliant streams in up to 8K 10-bit resolution & HDR-10 support

KEY FEATURES
- Live archiving to disk or cloud
- Built-in AV processing
- Common SDI and IP input sources
- Hybrid HEVC encoding with NVIDIA NVENC & MainConcept software encoding modes

OPTIMIZE WITH MAINCONCEPT PROFESSIONAL SERVICES
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SOFTWARE REQUIREMENTS

OPERATING SYSTEMS:
- Microsoft Windows Server 2012
- Microsoft Windows 10
- Linux CentOS 7.9

BROWSERS:
- Mozilla Firefox v52.5.x ESR or newer
- Google Chrome v62.0.x or newer
- Microsoft Internet Explorer v11.0.x or newer

PRODUCT SPECIFICATIONS

INPUT
- SDI capturing
- IP streams: UDP (MPEG-2/H.264 in MPEG TS), HTTP, RTMP, authenticated RTSP (in TS)
- 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
  - HLS (HEVC/AAC) up to 8K (8-bit/10-bit), incl. playlist & packaging
  - DASH-264 (AVC/AAC) up to 1080p (8-bit), incl. MPD and packaging
  - DASH-265 (HEVC/AAC) up to 8K (8-bit/10-bit), incl. MPD and packaging
  - HEVC 8K60 live encoding using on-premise hardware or in AWS EC2 instances
  - Simultaneous encoding of 8 MPEG-DASH or HLS quality layers

PROCESSING
- Closed Caption (EIA-608 & EIA-708)
- Ad-Insertion passsthrough (SCTE-35 & SCTE-104)
- AMF data insertion into RTMP output via REST API
- Logo and Slate insertion
- 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
- Loudness normalization (CALM-Act/EBU R128)
- Audio/Video Processing Tools
  - Deinterlacing, framerate conversion, scaling
  - Channel mapping
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OUTPUT
- Archive live streams to disk as MP4 or to Amazon S3 file storage
- IP streams: RTMP, UDP, RTP, RTSP, HTTP
- Program/Service Name, ID and Provider when outputting TS over UDP and TS over HTTP
- CDN Support: Akamai, Amazon CloudFront
- Apple HLS AES-128 common encryption, plus custom HLS encryption key file import

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
- Configure multiple servers in parallel with settings propagation

ABOUT MAINCONCEPT
Since 1993, MainConcept has provided best-of-breed video/audio codec solutions that fuel creativity and business globally for professional video production, multimedia, broadcast, digital signage, gaming, medical and security industries. Our SDKs, transcoding applications and plugins are used across industry verticals to meet an ever-expanding list of use cases. With world-class engineering, exquisite attention to detail, and best-in-class support and professional services, we are constantly innovating to deliver you the simplicity you need with the customer experience you deserve. MainConcept codecs are engineered to surpass the challenges of even the most demanding use cases and are used by organizations such as Adobe, Dalet, Nikon, Intel, MAGIX, Playback, Soliton, Cinnafilm and Endeavor Streaming.