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 real-time. 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/video 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 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), 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 capture board

SOFTWARE REQUIREMENTS

OPERATING SYSTEMS:
• Microsoft Windows Server 2012
• Microsoft Windows 10
• Linux CentOS 7.2

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

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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PRODUCT SPECIFICATIONS

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 Quick Sync Video technology for dedicated Intel Core Processors
- 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
  - 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 (SCET-35 & SCET-104): Logo & Slate insertion for lost signals
- 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: Channel mapping
- Deinterlacing, framerate conversion, scaling

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

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

CONTACT
info@mainconcept.com

MORE INFORMATION
www.mainconcept.com/ffmpeg