

# MainConcept Transcoding SDK

Combine your encoding presets into a single tool

MainConcept Transcoding SDK is an all-in-one production tool offering developers the ability to manage multiple codecs and parameters in one place. This streamlined SDK supports the latest encoders and decoders from MainConcept, including HEVC/H.265, AVC/H.264, DVCPRO, and MPEG-2, as well as Dolby Digital AC-3 and E-AC-3 audio, including Dolby Evolution Framework and metadata processing support.

For professional 10-bit 4:2:2 AVC and HEVC production formats, Transcoding SDK offers everything you need to create file-based encoding and transcoding workflows. The numerous ready-to-use profiles for Sony (XAVC and XDCAM), Panasonic (P2 DVCPRO and P2 AVC ULTRA), AS-11 UK DPP, RP2027 AVC-Intra, and more, cover virtually any professional production scenario.

The transcoder generates compliant streams across different devices, media types, and camcorder formats, and includes support for MPEG-DASH and Apple HLS adaptive bitstream formats. Compliance ensures content is delivered that meets each unique specification.

## PACKAGES

### HEVC/H.265 Encoder Package

HEVC encoder to create Blu-ray UHD, HLS, DASH-265, and other generic 8-bit/10-bit 4:2:0/4:2:2 streams up to 12K. Includes hardware encoding using Intel Quick Sync Video and NVIDIA NVENC (incl. Hybrid GPU).

### HEVC/H.265 SABET Encoder Package

HEVC Encoder Package plus our Smart Adaptive Bitrate Encoding Technology (SABET). Includes hardware encoding using Intel Quick Sync Video and NVIDIA NVENC (incl. Hybrid GPU).

### MPEG-2 Encoder Package

MPEG-1 and MPEG-2 compliant stream generation

### MPEG-4 Part 2 Encoder Package

MPEG-4 Part 2 and H.263 compliant stream generation

### VC-1 Encoder Package

WMV encoding

### AVC/H.264 Encoder Package

AVC encoder to create HLS, DASH-264, and many more 8-bit 4:2:0 streams. Includes hardware encoding using Intel Quick Sync Video and NVIDIA NVENC.

### AVC/H.264 Broadcast Encoder Package

Encoding up to AVC 10-bit High 4:2:2 profile support, incl. AVC-Intra 50/100/200, AVC-ULTRA and XAVC presets. Includes hardware encoding using Intel Quick Sync Video and NVIDIA NVENC.

### DVCPRO HD Encoder Package

DV, DVCPRO 25, 50 and 100 (HD) support

### JPEG 2000 Encoder Package

DCP compliant frames generation

### Dolby Digital Plus Pro Encoder Package

AC-3/E-AC-3 audio for up to 7.1 channels, incl. Dolby Evolution Framework for intelligent loudness measurement and adjustment

## ALL-IN-ONE PRODUCTION TOOL

### HOW DOES IT WORK?

- Transcoding SDK works as an additional layer above MainConcept codecs.
- The easy-to-use API replaces the need to set conversion parameters manually by allowing you to configure the encoders with predefined profiles, letting the transcoding engine take care of the rest.
- If needed, manual control of the conversion process is supported, including source/target destinations, export presets, transcoding, and filter parameters.

### KEY FEATURES

- Optimized SDK for Arm platforms powered by Apple Silicon and Qualcomm Snapdragon X CPUs
- Integrated SDKs for fast deployment of transcoding tools
- Hardware encoding powered by Intel and NVIDIA
- Ready-to-use processing filters
- HDR conversion to multiple formats
- HEVC/H.265 Main/Main 10 profiles up to 12K
- Pre-defined AS-11 UK DPP presets

## SYSTEM REQUIREMENTS

- Microsoft Windows 10 or higher & Windows 11 (Arm)
- Apple macOS 10.15 or higher (Intel) & macOS 11.0 or higher (Apple Silicon)
- Linux Rocky 8.9 (RHEL 8 compatible), Ubuntu 20.04 LTS or higher; glibc version: 2.28 (64-bit)

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## FEATURES

### Optimized libraries for transcoding workflows on Arm platforms

Unique SDK to build complete file-based encoding and transcoding workflows or services for Arm platforms like Apple Silicon running macOS and Qualcomm Snapdragon X running Windows.

### Powerful & easy-to-use API

Comes with the MainConcept API, allowing you to easily create your own transcoding software via graphical user interface.

### Flexible conversion tool development & usage

Fast development of conversion tools that can be controlled via command line or act as a server-side transcoding application.

### Integrated SDKs

Preconfiguring the industry-leading MainConcept SDKs means developers do not need to focus on the codec settings and parameters, enabling fast deployment of file-based transcoding tools.

### Pre-defined AS-11 UK DPP presets

Ready-to-use presets for AS-11 UK DPP SD (MPEG-2) and HD (AVC/H.264) for broadcast workflows, including the ability to load external XML metadata files for encoding and processing UK-shim compliant MXF files.

### Input source → transcoding preset → output file

Set the encoders using predefined profiles, the transcoding engine takes care of the rest.

### Complete user control

Control every aspect of the conversion process, including source/target destinations, export presets, transcoding, and filter parameters.

### Ready-to-use quick start tutorials

Use the tutorials for direct, on-server content creation. Tutorials include ready-to-use quality and performance presets.

### Closed caption support

Pass-through of CEA-608 and CEA-708 (aka EIA-608/708) captions from sources containing ATSC A/53 or A/72 captions.

### Subtitle support

Subtitle visibility improvements, such as adjustable font type, color and outline features (\*.srt and \*.sub files).

### HLS production compliant with latest iOS and macOS specs

HLS presets using HEVC/H.265 and AVC/H.264, including hybrid playlist generation with support for MPEG-2 TS and fMP4 segments fully compliant with encoding recommendations and specs from Apple.

### Video & audio processing filters

Includes ready-to-use video and audio filters for a variety of production environments and occasions, or work with your own filters by using the powerful Transcoding SDK Filter API for easy integration.

### Batch list transcoding

Execute multiple tasks efficiently by setting up a batch process for files that use specified encoding presets and output formats.

### Watch folder support

Configure folders with predefined encoding parameters, leaving it to the application to automatically process incoming media whenever it is added.

### Smart rendering & remuxing support

Time-saving smart rendering and remuxing support for various codecs and multiplexers.

### High Dynamic Range (HDR) conversion

Allows PQ / HDR-10 to HLG conversion and vice versa. Moreover, Transcoding SDK provides PQ / HDR-10 and HLG to SDR conversion to create content compliant with non-HDR devices.

### Hardware encoding powered by Intel and NVIDIA

Support for AVC and HEVC hardware encoding using Intel Quick Sync Video and NVIDIA NVENC on Windows and Linux. Hybrid GPU-accelerated HEVC encoding is available on NVIDIA RTX and Quadro boards (Turing & Ampere architecture), delivering hardware performance in software quality.

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## SPECIFICATIONS

### Core API

- Transcoding process control
- Management of processing modules
- Utility functions
- Built-in processing modules

### Input Formats

- DirectShow import (Windows)
- QuickTime import (Windows & macOS)
- GStreamer import (Windows & Linux)
- MPEG-1/2, MPEG-4 Part 2, VC-1, HEVC/H.265 & AVC/H.264
- DV / DVCPRO
- JPEG 2000
- Apple ProRes
- Avid DNxHD and DNxHR

### Video Output Formats

- HEVC/H.265 (incl. IQSV & NVENC)
- AVC/H.264 (incl. IQSV & NVENC)
- MPEG-1/2
- DV / DVCPRO 25/50/100 (HD)
- VC-1
- JPEG 2000
- MPEG-4 Part 2
- RAW/YUV

### Audio Output Formats

- PCM / LPCM
- MPEG Layer 1/2 Audio
- AAC, HE-AAC
- WMA, AMR
- Raw
- DV
- Dolby Digital Plus Pro (AC-3 & E-AC-3)

### Muxer Output Formats

- Elementary Streams
- MPEG-2 Program Stream / Transport Stream
- MP4
- 3GP
- F4V
- ASF
- DV
- DIF
- MJ2
- MXF
- RAW

## 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 software development kits, 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, AVID, Autodesk, Corel, Dalet, Endeavor Streaming, Grass Valley, MAGIX, Nikon, PlayBox Neo, Wowza and Sony.

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### MORE INFORMATION

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