

# 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. 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.

Transcoding SDK was created to simplify the workflow for developers who frequently move between codecs and output to a multitude of configurations.

## AVAILABLE PACKAGES

<b>HEVC/H.265 ENCODER PACKAGE</b>	HEVC/H.265 encoder for creating HLS, DASH-265, and other generic 8-bit/10-bit 4:2:0 and 4:2:2 streams in ES, MP4 and TS file formats. Includes hardware encoding support using Intel Quick Sync Video (IQSV) and NVIDIA NVENC (including Hybrid GPU) for Windows and Linux.
<b>HEVC/H.265 SABET ENCODER PACKAGE</b>	HEVC/H.265 encoder package plus Smart Adaptive Bitrate Encoding Technology (SABET).
<b>AVC/H.264 ENCODER PACKAGE</b>	AVC/H.264 encoder to create HLS, DASH-264, and other 8-bit 4:2:0 streams in ES, MP4, and TS.
<b>AVC/H.264 BROADCAST ENCODER PACKAGE</b>	Encoding up to AVC/H.264 10-bit High 4:2:2 profile support, including AVC-Intra 50/100/200 and XAVC presets.
<b>AVC/H.264 IQSV ENCODER PACKAGE</b>	AVC/H.264 Intel Quick Sync Video encoding for Windows and Linux. Free add-on for AVC/H.264 Encoder Package.
<b>DVCPRO HD ENCODER PACKAGE</b>	DV, DVCPRO 25, 50 and 100 (HD) support.
<b>JPEG 2000 ENCODER PACKAGE</b>	DCP compliant frames generation.
<b>MPEG-2 ENCODER PACKAGE</b>	MPEG-1 and MPEG-2 compliant stream generation, including professional XDCAM support.
<b>MPEG-4 PART 2 ENCODER PACKAGE</b>	MPEG-4 Part 2 and H.263 compliant stream generation.
<b>VC-1 ENCODER PACKAGE</b>	WMV encoding.
<b>DOLBY DIGITAL PLUS PRO ENCODER PACKAGE</b>	AC-3 and E-AC-3 audio support.

## 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

- 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
- Pre-defined AS-11 UK DPP presets

## FEATURES

### **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**

Updated 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.

## OPERATING SYSTEM

- Windows: Windows 7 or higher (64-bit)
- macOS: 10.9 or higher (64-bit)
- Linux: CentOS 7.4, Ubuntu 14.04 or higher; glibc version: 2.17 (64-bit)

## HARDWARE

### FOR HEVC/H.265 OR AVC/H.264 HARDWARE ENCODING THE FOLLOWING PROCESSORS ARE RECOMMENDED:

- Intel XeonE3 CPU family with integrated Intel® HD Graphics GPU
- Intel Core CPU family with integrated Intel® HD Graphics GPU, e.g. i7-7700 or i7-7000K, etc.
- NVIDIA RTX, GTX and Quadro boards (HEVC/H.265 only)

## SPECIFICATIONS

### CORE API

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

### INPUT FORMATS

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

### VIDEO OUTPUT FORMATS

- HEVC/H.265 (incl. IQSV & NVENC)
- AVC/H.264 (incl. IQSV)
- 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
- MPEG-2 Transport Stream
- MP4
- 3GP
- F4V
- ASF
- DV
- DIF
- MJ2
- MXF
- RAW