

Transcoding SDK

Professional Transcoding Engine



Formerly known as Reference SDK, Transcoding SDK offers improved quality and performance as well as exciting new features and stability enhancements to further optimize the workflow in your application, service or environment.

The MainConcept Transcoding SDK consists of a powerful encoding & decoding engine supporting all renowned MainConcept codecs. Due to the extensive format support, the transcoding engine offers highest flexibility to generate streams that are compliant to numerous devices and renowned media, such as Blu-ray Disc, Sony PSP, many Apple mobile devices, DVD, DivX, DivX Plus and DivX HEVC, the whole Sony XDCAM portfolio, Adobe Flash, Panasonic P2 AVC-Intra and DVCPRO, etc.

Transcoding SDK also offers a HEVC/H.265 Encoding Plug-In, providing comprehensive transcoding support and import capabilities for the 4:2:0 8-bit and 10-bit profiles in MP4 and Transport Stream file formats. The ready-to-use Main 10 presets allow HEVC 10-bit content creation in your solution. Additionally, the encoder includes preconfigured templates for DivX® HEVC 720p, 1080p and 4K profiles in MKV file format that can be played back with the current releases of DivX Player and DivX Web Player.

Transcoding SDK is the perfect engine for solutions that cater to content preparation and transcoding into adaptive formats for digital delivery, such as DivX Plus Streaming™, Apple HLS or DASH-264 and DASH-265, including playlist generation for HLS and manifest file creation for DASH. For DASH-265 and DivX HEVC Streaming, MainConcept Transcoding SDK offers the HEVC/H.265 SABET Encoding Plug-In; our patent-pending Smart Adaptive Bitrate Encoding Technology that enables efficient accelerated encoding across HEVC profiles. The technology allows encoding of up to 10 output streams from a single source while maintaining equal high quality across all levels within an adaptive stream set by leveraging shared data. SABET effectively provides software programmers the ability to enable their solutions to encode adaptive formats in less time, or with less hardware.

You can even create and edit XML based transcoding presets and use them in your own applications. Depending on the platform used, MainConcept Transcoding SDK offers import via DirectShow, QuickTime, GStreamer as well as MPEG, HEVC/H.265 and AVC/H.264. Powerful features, such as watermarking, watch folder and batch list transcoding, allow you to leverage the same conversion tools that power the TotalCode product portfolio. Additionally, the Transcoding SDK supports several powerful subtitling and closed caption features that make your solutions suitable for professional broadcast as well as production environments.

NEW FEATURES

- Transcoding SDK now comes with the latest HEVC SDK 8.1 release.
- Transcoding SDK now comes with the latest Codec SDK 10.4 release.
- Ready-to-use DASH-Live profiles added, including MPD generation and combining.
- SMPTE 436M Closed Caption passthrough.

Leverage more of our codec expertise with Transcoding SDK

This particular SDK is aimed at developers who want to release their own transcoding applications, service or environment in a portable and extensible fashion, built on top of MainConcept's Low Level SDKs. Key advantages:

- Comes with a well-documented API (Application Programming Interface - in C programming language) allowing you to easily create your own transcoding software with a GUI (Graphical User Interface).
- Fast development of conversion tools that can be controlled via command line or act as a server side transcoding application.
- DirectShow filters for decoding are also included for Windows operating systems.
- QuickTime module for importing ProRes and other QuickTime compliant MOV files (QuickTime Player install required)

Developers have the opportunity to easily add the transcoding engine's functionalities to their own application design. Moreover, it enables them to integrate the MainConcept transcoding engine into custom workflows and optimize their transcoding environment.

How does it work?

The MainConcept Transcoding SDK works as an additional layer above the popular MainConcept Codec SDK, so developers do not need to manage the numerous codec settings and parameters required for transcoding. Due to its easy-to-use API on top of the Codec SDK, there is no need to set all conversion parameters manually, as developers can configure the encoders with predefined profiles where the transcoding engine will take care of the rest of the process. This flexible API is as simple as: **Input Source => Transcoding Preset => Output File.**

The functionality – if required – to control every aspect of the conversion process is still included in Transcoding SDK, including source/target destinations, export presets, transcoding and filter parameters, etc.

It is even possible to deploy the Transcoding SDK as is on a server, by using the numerous tutorials included for content creation and preparation, as it already offers ready-to-use presets optimized for both quality and performance.

FEATURES

Powerful & easy-to-use API

Comes with a well documented API (Application Programming Interface - in C programming language) allowing you to easily create your own transcoding software with a GUI (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.

Additional DirectShow import & playback on Windows

On Windows, Transcoding SDK additionally includes DirectShow filters for decoding.

Tight integration with MainConcept Codec SDK

Transcoding SDK works as an additional layer above the popular MainConcept Codec SDK, so developers do not need to take care of the numerous codec settings and parameters.

Input Source -> Transcoding Preset -> Output File

Developers can set the encoders by using predefined profiles, and the transcoding engine takes care of the rest.

Complete user control

Control every aspect of the conversion process by the Transcoding SDK, incl. source/target destinations, export presets, transcoding and filter parameters, etc.

Ready-to-use tutorials as a quick start

Use Transcoding SDK as is on a server using the numerous tutorials included for direct content creation. They already offer ready-to-use presets focusing on both quality and performance.

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 changing the font type, color and outline features (*.srt and *.sub files).

Gamma shift correction

Preserve the original color scheme for QuickTime file import.

Video & Audio processing filters

Many powerful video and audio filters for different production environments and occasions.

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 and leave 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.

SPECS

THE CORE API CONSISTS OF THE FOLLOWING ITEMS:

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

AVAILABLE 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

AVAILABLE OUTPUT VIDEO FORMATS:

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

AVAILABLE OUTPUT AUDIO FORMATS:

- PCM / LPCM
- MPEG Layer 1/2 Audio
- MP3 (DivX only)
- AAC, HE-AAC
- WMA
- AMR
- Raw
- DV
- Dolby Digital Plus Pro (AC-3 & EAC-3)

AVAILABLE OUTPUT MUXER FORMATS:

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

TRANSCODING SDK ENCODER PACKAGES

HEVC/H.265 ENCODER PACKAGE

HEVC encoder to create DivX HEVC, DASH-265, and other generic 8-bit/10-bit 4:2:0 HEVC streams in ES, MKV, MP4 and TS file formats.

HEVC/H.265 SABET ENCODER PACKAGE

HEVC / H.265 SDK including our Smart Adaptive Bitrate Encoding Technology (SABET).

AVC/H.264 ENCODER PACKAGE

AVC / H.264 8-bit 4:2:0 profile encoding support.

AVC/H.264 BROADCAST ENCODER PACKAGE

Up to AVC / H.264 10-bit High 4:2:2 profile support, incl. AVC-Intra 50/100/200 and XAVC Intra presets.

AVC/H.264 IQSV ENCODER PACKAGE

AVC / H.264 Intel Quick Sync Video encoding for Windows.

DVCPRO HD ENCODER PACKAGE

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

JPEG 2000 ENCODER PACKAGE

DCP compliant frames generation.

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.

DIVX ENCODER PACKAGE

Generate DivX, DivX Plus, DivX Plus Streaming content.

VC-1 ENCODER PACKAGE

WMV and Blu-ray Disc encoding.

DOLBY DIGITAL PLUS PRO ENCODER PACKAGE

Full AC-3 and EAC-3 audio support.

TECH SPECS

- Microsoft® Windows® Windows 7, Windows 8, Windows 10 (32-bit/64-bit)
- Apple Mac OS X 10.7 or higher (Mac/Intel), (32-bit/64-bit)
- Linux Ubuntu 14.04 LTS (glibc 2.19) or higher (32-bit/64-bit)

For Windows, Mac OS X and Linux, the codec package consists of a Low Level API (in the C programming language). Under Windows, it additionally includes DirectShow® decoder filters for file import. For QuickTime and ProRes import, QuickTime Player needs to be installed on the system.

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