MAIN CONCEPT®

MPEG-1/2

Comprehensive A/C Codec Library

Largest video codec libraries on earth, supporting nearly every major format in use today in both consumer and professional markets.

The MainConcept MPEG-1/2 SDK Packages enable applications to read, write and edit MPEG-1 and MPEG-2 streams in high quality with sensational speed. The SDKs are ideal for consumer-level products and broadcast usage.

The encoder is full featured, and it is possible to have access to nearly every MPEG setting imaginable. It also includes pre-configured templates for VCD, SVCD, DVD, HDV, CableLabs, XDCAM HD, XDCAM EX, Blu-ray and other standards. The MPEG-1/2 Video Encoder meets the highest broadcast quality standards and includes professional features like Transport Streams, 4:2:2 support, 2-pass encoding and more. However, the SDK is so flexible that it can also be used to capture analog or DV material in real-time to MPEG.

The MPEG-1/2 Encoder Package includes a wrapper component that provides MPEG-2 Smart Rendering functionality for editing, cutting and smart copy at any frame position.

The MPEG-1/2 Video Decoder can process MPEG video streams produced by the MainConcept MPEG-2 Demultiplexer or by any other compliant filter, such as Microsoft MPEG-2 Splitter, MPEG-2 Demultiplexer or MPEG-1 Stream Splitter.

On Windows, DirectShow filters provide additional stream handling, such as reading from a file or network source and rendering it to a window or DirectDraw® surface. The filter can process Closed Captions (CC) and has a CC output pin. The CC data output is executed in a way suitable for decoding by the software Line 21 decoder filter, which comes with DirectShow.

An optional Codec Package includes an encoder wrapper component that provides **MPEG-1/2 Smart Rendering** functionality for editing, cutting and smart copy at any frame position. It only works in combination with the MPEG-1/2 Encoder SDK and the MPEG-1/2 Decoder SDK.

MAINCONCEPT MPEG-1/2 SDK PACKAGES

MPEG-1/2 ENCODER SDK

MPEG-1 and MPEG-2 Video Encoding for DVD, Blu-ray, DVB and ATSC broadcast applications and XDCAM. Format support includes MPEG Transport Streams and MP4/MOV and MXF for compliance with the full range of XDCAM formats.

MPEG-1/2 DECODER SDK

MPEG-1 and MPEG-2 Video Decoding for DVD, Blu-ray, DVB and ATSC broadcast applications and XDCAM. Format support includes MPEG Transport Streams and MP4/MOV and MXF for compliance with the full range of XDCAM formats.

MPEG-1/2 SMART RENDERING SDK

Optional package for MPEG-1/2 Encoder SDK providing functionality for frame-accurate editing, cutting and smart copy to speed up conversion of MPEG-1/2 source content. Only works in combination with MPEG-1/2 Encoder SDK and MPEG-1/2 Decoder SDK.

FEATURES

ENCODER:

- Software-only MPEG-2 (ISO/IEC 13818-2) and MPEG-1 (ISO/IEC 11172-2) stream encoding.

- Real-time MPEG capture from analog and DV sources or other WDM/DirectShow supporting devices.

- Support for all MPEG-1 and MPEG-2 parameters.

- Supported Profiles: Simple, Main, High and 4:2:2.

- Supported Levels: Low, Main, High and High 1440.

- Enhanced scaling and deinterlacing.

- Bitrate modes: CBR and VBR.

- Noise filtering.

- Single pass & 2-pass encoding.

- Hyper-Threading as well as multi-core support.

- Half Pel Search.

- Low Level support for chroma quant matrices (4:2:2 chroma format).

- Low Level support for writing quant matrix extension (ISO/IEC 13818-2: 6.2.3.2, 6.3.11).

- MPEG-2 Encoder filter allows several cropping, adding and dimensions adjusting features.

- Vertical cropping (in addition to horizontal cropping) for MPEG-2 Encoder Low Level if input height is bigger than the encoder setting (now it gets the center area of the video instead of the top left).

- AES3-302M support in MPEG Multiplexer.

- MPEG-2 IBP sparse index support for MXF file format.

- MPEG-1/2 Smart Rendering functionality for editing, cutting and smart copy at any frame position (optional).

DECODER:

- Software-only MPEG-2 (ISO/IEC 13818-2) and MPEG-1 (ISO/IEC 11172-2) stream decoding in HD.

- High Profile @ High Level decoding – Supports all MPEG-2 profiles / levels, excluding scalability extensions.

- Full-resolution, full-quality decoding / playback (high precision arithmetic, IEEE 1180-1190 compliant IDCT, half-pel motion compensation).

- Optimized for Hyper-Threading Technology and multi-core systems.

- Optimized for the most efficient CPU usage – Takes advantage of MMX™, SSE™, SSE2™, and 3DNow® extensions when available.

- Special control interface – Programmatic control of decoding quality and frame capture interface.

- Software deinterlacing.

- Optional double precision IDCT.

- ATSC Stream Decoding – Supports 18 ATSC formats.

- DXVA 1.0 and 2.0 GPU Hardware acceleration support.

- Visual quality improving (HQ Upsample).

- Closed Captions decoding.

STREAM TYPES & FORMATS

Elementary Stream:
Generic MPEG-1 and MPEG-2 Elementary Streams

Transport Stream:
Blu-ray Disc, HD DVD, DVB, ATSC, ATSCHI, DVHS, D10, HDV HD1, HDV HD2, HDTV, CableLabs

Program Stream:
VCD, SVCD, DVD

MPEG-1 System Stream (LL):
Generic MPEG-1 System Streams

MP4:
Sony XDCAM EX

MXF:
Sony XDCAM HD, Sony XDCAM IMX, Ikegami GFCAM, D10

COMPONENTS

MPEG-1/2 ENCODER SDK	MPEG-1/2 Video Encoder MPEG Audio Encoder PCM Audio Encoder (LL) MPEG Multiplexer MXF Multiplexer MP4 Multiplexer
MPEG-1/2 DECODER SDK	MPEG-1/2 Video Decoder Media File Importer (LL) MPEG Audio Decoder MPEG Demultiplexer MXF Demultiplexer MP4 Demultiplexer
MPEG-1/2 SMART RENDERING SDK	MPEG Smart Render Wrapper (optional package license)

TECH SPECS

- **Microsoft® Windows® 7, Windows 8, Windows 10 (32-bit/64-bit)**

- **Apple Mac OS X 10.6 or higher (Mac/Intel), (32-bit/64-bit)**

- **Linux Ubuntu 10.04 LTS (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® filters for decoding and encoding.

MORE INFORMATION:
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REQUEST YOUR DEMO SDK:
WWW.MAINCONCEPT.COM/LICENSING-FORM.HTML