

# MainConcept SDKs for GStreamer

Simple integration to manage complex workflows for professional Production Formats, OTT Content Creation or Broadcast Delivery

If your solution is already based on the GStreamer framework or if you plan to develop a new product or service from scratch, the MainConcept® GStreamer SDKs, available for Production Format Creation, OTT Content Creation or Broadcast Delivery, are the perfect base for encoding and transcoding jobs within this popular architecture.

To meet video compression requirements, the unique all-in-one libraries integrate AVC/HEVC Intel Quick Sync Video and NVENC HEVC hardware encoding, as well as Hybrid HEVC GPU Accelerated Encoding on NVIDIA RTX graphics engines.

All industry-leading MainConcept libraries necessary for the creation of GStreamer pipelines generating DVB, ATSC, CMAF-DASH, MPEG-DASH and Apple HLS content are included in the SDKs, as are multi-audio track and subtitle support. Developers familiar with the GStreamer API in their workflow or services can easily integrate the MainConcept GStreamer libraries to quickly realize amazing results.

## MAINCONCEPT OTT CONTENT CREATION SDK

MainConcept OTT Content Creation SDK for GStreamer enables rapid application development and delivery of live and on-demand video content to any device. With it, you get a complete encoding and transcoding pipeline, including MainConcept's state-of-the-art HEVC/H.265 and AVC/H.264 video encoders, developed for seamless integration within the GStreamer API.

## MAINCONCEPT BROADCAST DELIVERY SDK

The MainConcept Broadcast Delivery SDK for GStreamer allows the creation of complete DVB and ATSC encoding as well as transcoding pipelines in broadcast playout and production workflows based on GStreamer plugin architecture. DVB subtitles, specification of program names in SDT tables, and injection of SCTE-35 messages can be deployed in GStreamer pipelines in combination with the popular MainConcept MPEG-2 TS Multiplexer.

## MAINCONCEPT PRODUCTION FORMAT CREATION SDK

The MainConcept Production Format Creation SDK for GStreamer is a convenient way to create pipelines that generates specs compliant Sony and Panasonic camcorder streams. It is suitable for the professional production market that requires approved Sony XDCAM HD, IMX, EX as well as Sony XAVC-Intra, LongGOP content. It also produces Panasonic conformant P2 AVC-Intra, AVC-ULTRA and AVC LongG streams. Moreover, the new GStreamer SDKs includes many more MPEG-1/2 and AVC/H.264-based encoding profiles, incl. RP2027 AVC-Intra.

## OPERATING SYSTEM

- Microsoft Windows 10 (64-bit)
- Linux Ubuntu 18.04 (glibc 2.27) or newer (64-bit)
- GStreamer 1.16 or newer

## POWER UP YOUR PROFESSIONAL BROADCAST & OTT WORKFLOWS

### SAVE TIME

- Access MainConcept Production Format Creation, OTT Content Creation or Broadcast Delivery using GStreamer API
- Quick and easy setup of complex workflows
- Sony XDCAM and XAVC compliant presets
- Panasonic P2 AVC-Intra and AVC-ULTRA compliant presets, incl. scripts for descriptive metadata and folder creation
- ATSC and DVB compliant presets
- CMAF-DASH, MPEG-DASH and Apple HLS compliant encoding and packaging
- Multi-language track support
- DVB, WebVTT and TTML subtitle support
- SDT tables program name support
- PID specification for each Elementary Stream
- SCTE-35 message injection into Transport Stream
- Intel Quick Sync Video and NVIDIA NVENC hardware encoding
- Hybrid GPU accelerated encoding for HEVC/H.265
- Generic MPEG-2, AVC and HEVC presets as a starting point for more user-defined encoding profiles
- Comes with video and audio encoder, multiplexer, packager and helper plugins

### OPTIMIZE WITH MAINCONCEPT PROFESSIONAL SERVICES

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## OTT CONTENT CREATION SDK COMPARISON

	OTT CONTENT CREATION SDK	OTT CONTENT CREATION SDK FOR GSTREAMER
API	MainConcept Low Level API	GStreamer API
MP4 Multiplexer	✓	✓
MPEG-2 Multiplexer	✓	✓
MPD Generator	✓	✓
HLS Generator	✓	✓
File Sink	n/a	✓
Audio Encoders	Optional License	✓
AVC/H.264 Video Encoder (incl. NVENC)	Optional License	✓
• IQSV Hardware Encoding	Optional Add-on	Optional Add-on
HEVC/H.265 Video Encoder (incl. IQSV & NVENC)	Optional License	✓
• Hybrid GPU accelerated Encoding	Optional Add-on	Optional Add-on
Ready-to-use DASH/HLS preset files	No	✓
Command-line control	No	✓ (via GStreamer tools)

## ABOUT GSTREAMER

GStreamer is a flexible and fast multi-platform framework to create complex multimedia workflows. It is designed for developing applications, services and systems intended for encoding, decoding and streaming environments. GStreamer natively supports numerous media-handling components. Since it is plugin based and has a modular approach for creating pipelines, it can be easily extended to support 3rd-party codecs like those available with MainConcept OTT Content Creation or Broadcast Delivery SDKs for GStreamer. The cross-platform availability of GStreamer makes it desirable for developers whether they work on desktop or mobile platforms.

## PACKAGES

- OTT Content Creation SDK for GStreamer**  
 Includes the MainConcept AVC/H.264 and HEVC/H.265 Video Encoders and related libraries for GStreamer for generating CMAF-DASH, MPEG-DASH and Apple HLS content, including packaging to create a complete adaptive streaming set.
- Broadcast Delivery SDK for GStreamer**  
 Includes the MainConcept AVC/H.264 Video Encoder, MPEG-2 Transport Stream Multiplexer and related libraries for GStreamer for generating DVB and ATSC compliant content.
- Production Format Creation for GStreamer**  
 Includes the MainConcept MPEG-2 and AVC/H.264 Broadcast Video Encoders, the PCM Audio Encoder as well as MXF and MP4 Multiplexers for GStreamer to generate Sony XDCAM, Sony XAVC as well as Panasonic P2 AVC-Intra and P2 AVC-ULTRA compliant streams.
- Hybrid GPU Accelerated HEVC Encoding**  
 Add-on enabling GPU Accelerated HEVC Encoding on NVIDIA RTX boards.
- AVC/H.264 Encoding for Intel Quick Sync Video**  
 Add-on enabling accelerated video encoding with reduced CPU usage on the Intel Core and Intel Xeon E3 chipset family.

## 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, Nikon, Intel, MAGIX, Playbox, Soliton, TourGigs, Cinnafilm and Endeavor Streaming.

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