



## STRYME GmbH

MainConcept® codecs, packaging & streaming components are used in STRYME's all-in-one video server for multi-format live production and broadcasting

The broadcast industry requires robust and reliable solutions for their daily production workflows. Broadcasters need high performance, stability and flexibility to automate their production process efficiently. The Austrian market leader, STRYME, manufactures and offers tailored professional production and automation solutions for specialized broadcasters for more than a decade. Renowned for its uncompromising quality and compelling out-of-the-box solutions that simplify, speed up and optimize daily broadcast workflows, STRYME provides powerful video servers that fulfill the strict requirements of handling every format and every codec. Video servers available today must be able to encode, decode and scale all different media 24/7 within a single solution. For the perfect ingest and playout experience, a competitive production workflow requires the best performance and state-of-the-art encoding, decoding, packaging and streaming libraries.

## CHALLENGES

Founded in 2005, STRYME has been developing and offering professional video servers as well as turn-key solutions for small, medium-sized and specialized broadcasters. Their close relationship to the major Austrian Broadcast Corporation ORF served as a door opener to reach other renowned customers and get many exciting projects, solving complex production jobs in Europe, Russia and South Korea.

Finding solutions for these workflow challenges not only calls for a broad library of different video and audio codecs, but also for a full set of network streaming components – both on the server and on the client side – as well as for technologies generating ready-to-use adaptive bitrate content like MPEG-DASH and Apple HLS.

To avoid high integration costs for codecs from different vendors using different APIs, companies prefer an all-in-one solution for managing multiple media formats. STRYME enables multi-codec support in their GENESIX Video Server V9 for HEVC/H.265, AVC/H.264, MPEG-1/2, DVCPRO HD and MPEG-4 Part 2. To satisfy the full scope of ingest and playout delivery, STRYME needed a network streaming server as well as client libraries for their workflow.



### PLATFORMS:

- GENESIX Video Server V9

### MARKETS:

- Broadcast
- News & Sports
- TV Channels
- System Integrators

### USE CASE:

- Ingest / Playout
- MAM
- Monitoring
- Editing

### MAINCONCEPT SDKS:

- HEVC/H.265
- AVC/H.264 BC
- MPEG-1/2
- DVCPRO HD
- MPEG-4 Part 2
- Converter & Scaler
- Network Server / Client BC
- DASH / HLS Multiplexing & Packaging

## AT A GLANCE:

- MainConcept powers most of STRYME's media production & streaming.
- Everything Ingest – Up to 16 flexible configurable input / output channels in SD/HD/4K.
- STRYME's Video Server is used mainly to process video and broadcast TV content.
- High broadcast market coverage
- MainConcept provides a full set of codecs & formats.
- STRYME offers ingest, editing, MAM, graphic, playout & monitoring platform.
- MainConcept enables MPEG-DASH & Apple HLS production workflow.
- Qualified engineering support

For broadcasters, the major requirement is reliability and flexibility of their server product powered by industry-leading technology. STRYME needed a renowned partner that already had broad and deep expertise in the broadcast market and which would offer best-in-class codecs as well as robust network streaming components covering all popular protocols and standards in use today.

MainConcept provides 25 years of industry-leading codec engineering for the broadcast market. Besides a full set of powerful Encoder and Decoder SDKs to develop professional ingest and playout systems, MainConcept's product portfolio also features different packages of network streaming libraries that perfectly match broadcasters' needs. For STRYME, selecting MainConcept as their premier technology provider for their GENESIX Video Server V9 was a reasonable decision. MainConcept's Codec and Streaming SDKs handle the major formats in all common resolutions from SD to HD to UHD resolutions. Integrating MainConcept's Encoder, Decoder and Streaming SDKs has permitted STRYME to clear the hurdles they previously experienced.

## SUCCESS STORY

The STRYME GENESIX Video Server V9 is an all-in-one ingest, graphic, and playout solution that combines different production tasks in compelling quality made in Austria. It serves as a complete MAM (Media Asset Management), playout automation

and monitoring platform to process video footage for broadcasting TV content. Due to its flexibility, GENESIX Video Server can be integrated easily into existing infrastructures increasing the value of workflows by adding up to 16 simultaneous playout channels. This is more than STRYME's direct competitors offer in their servers today. GENESIX Video Servers work as a reliable 24/7 multi-channel production platform supporting all major industry standards. Sophisticated time-saving features, like transferring and editing while capturing footage, promote STRYME's flagship product as a cost-effective alternative in today's highly competitive broadcast server market.

Early in the process, STRYME was looking for a provider that offered codec components and was capable of dealing with all major video and audio formats in use today. The investigation itself did not take long, but the actual evaluation process did take time due to the number of different codecs and formats. However, in the end, STRYME chose MainConcept as its core codec manufacturer for the decoding and encoding tasks within the GENESIX platform.

MainConcept develops powerful and robust libraries for audio / video decoding and encoding. Their components satisfy the strict demands of STRYME's quality standards. Licensing and integrating MainConcept's HEVC/H.265, AVC/H.264, MPEG-1/2, DVCPRO HD, and MPEG-4 Part 2 Encoder as well as Decoder SDKs has enabled broad format support within GENESIX Video Server V9 that STRYME's customers are relying on in professional ingest and playout environments.

In addition, MainConcept offers a wide product portfolio of additional SDKs for network streaming and the complete Apple HLS as well as the MPEG-DASH production and playback chain that includes playlist and MPD file creation. MainConcept's codec selection and one-stop offering network streaming proved to STRYME that MainConcept was the right choice for powering their GENESIX platform.

The GENESIX channel-in-a-box ingest, graphic and playout solution is mainly targeted to small and medium sized broadcasters. Features like multi-channel playout, playout automation, overlay graphics, traffic management, asset management and program scheduling ensure secure operation and integration into existing infrastructures and workflows up to 4K.



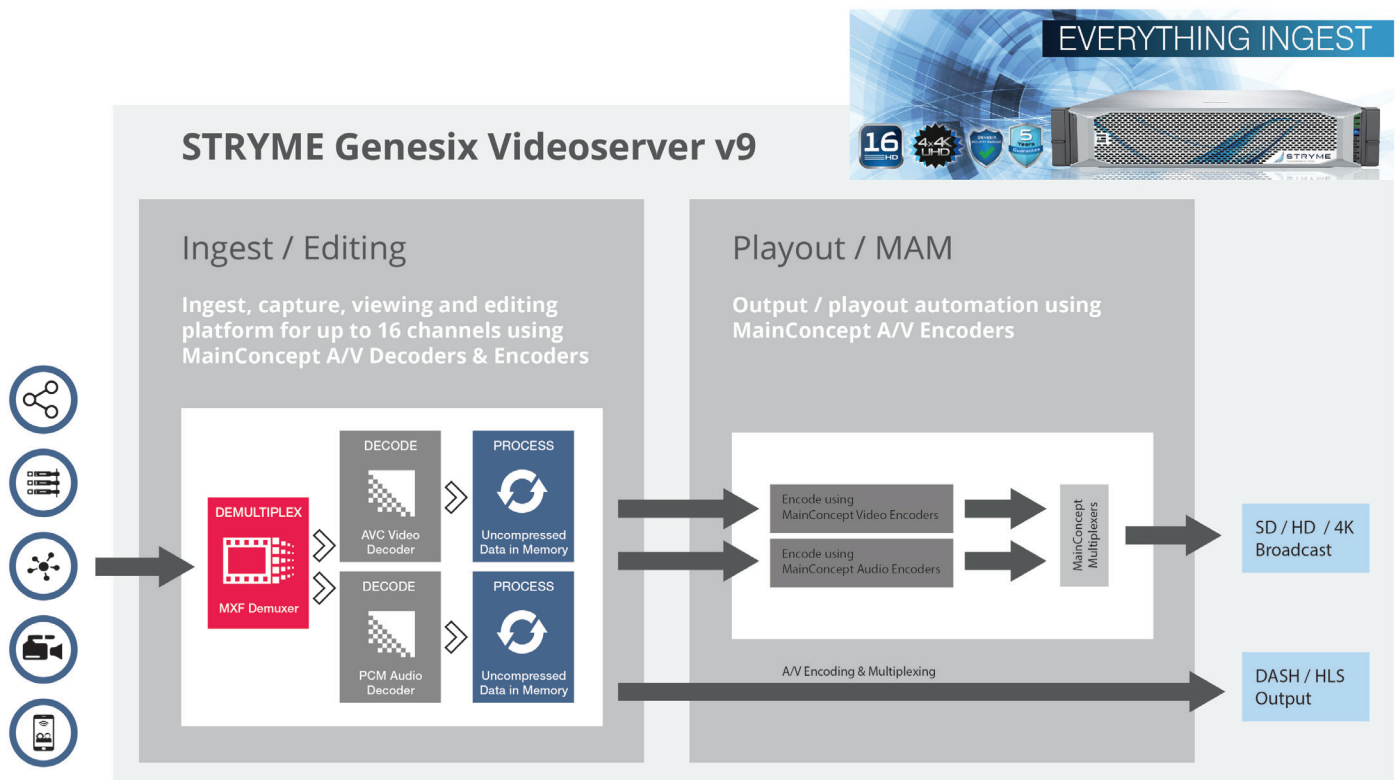
**"It's not about offering the latest industry features (we do that anyway), but about meeting our users' expectations. Just experience how we from STRYME simplify and automate your daily working processes."**

**GOCE ZDRAVKOSKI, CEO @ STRYME**

Featuring support for all industry standard codecs, formats and protocols – provided by MainConcept – enables maximum compliance and flexibility. GENESIX Video Server V9 lives its slogan, “Everything Ingest”, by allowing the processing of any codec and any media format from several IP and SDI sources, including professional camcorders (e.g. Panasonic P2 DVCPRO and AVC-Intra as well as Sony XAVC and the complete XDCAM camera portfolio).

The GENESIX high-tech 2U video server for broadcast professionals processes up to 16 channels, simultaneously, in real time. Allowing both SDI and IP ingest, customers rely on STRYME’s state-of-the-art technology for first-class sport, news and studio productions. Best performance, simplicity, efficiency, flexibility, superior usability and reliability are key features of the platform.

Under the hood, all codec and format processing is handled by MainConcept decoders, encoders, muxers, demuxers and the full-featured network streaming components that enable STRYME to provide best-in-class quality of service to its clients. MainConcept SDKs are the driving force behind the entire ingest and playout production chain by providing multi-channel encoding and transcoding functionality of IP and SDI feeds in SD, HD and UHD.



Managing and delivering OTT content and packaging it for multiple distribution channels and target audiences are essential parts of any high-end broadcast automation system. STRYME has, thus, licensed MainConcept’s HLS and DASH Multiplexing & Packaging as well as Demultiplexing & Client SDKs to ingest and create Apple HLS and MPEG-DASH compliant streams, including a playlist, master playlist, manifest and MPD files. In combination with the MainConcept Network Streaming Client & Server SDKs that support all important protocols in use today, such as RTMP, RTSP, RTP and HTTP, among others, the GENESIX Video Server platform is capable of sending and receiving video and audio data over the internet for users to watch content, on-the-fly, in extraordinary quality.



“With STRYME you are in terms of price and technology ahead of your competition without worrying about technical specifications or error-proneness, and can focus on what matters most!”

**CLEMENS CZEPE, CHIEF TECHNICAL OFFICER @ STRYME**

Opting for the state-of-the-art MainConcept HEVC/H.265 Encoder and Decoder libraries, STRYME sets the course for the future. GENESIX Video Server V9 can already seamlessly handle and process 4K content. Its powerful hardware allows live processing of HEVC 4K frames in astounding quality. Real-time ingest and playback of H.265 footage up to UHD is also available using MainConcept's powerful decoder components, which offer amazing speeds on NUMA (Non-Uniform Memory Access) systems while intelligently utilizing the system's resources.

STRYME has integrated many MainConcept SDK libraries within its GENESIX Video Server platform. Because of the flexible yet powerful API across all libraries, implementation effort for the STRYME development team was minimized, allowing STRYME to enable its solution to work seamlessly with many different media types demanded by their broadcast client base.

STRYME's customers expect a robust and versatile production platform that can handle as many channels as possible in all resolutions up to 4K and deliver to multiple devices and media. Deploying MainConcept Encoder, Decoder and Network Streaming libraries within the GENESIX Video Server facilitates wide interoperability among different industry standards designed for entirely automated ingest, editing and playout services.

With MainConcept's common API across all components, adding as well as extending codecs and formats is an easy job. With MainConcept's global engineering and integration support, STRYME was able to move forward efficiently and focus on the actual task of creating a powerful broadcast video server.

## CLOSING WORDS

MainConcept's product portfolio does not only consist of popular Encoder and Decoder SDKs, but also includes a complete set of ready-to-use libraries for creating ABR (Adaptive Bit Rate) streaming formats such as Apple HLS and MPEG-DASH for browsers, mobile and CE devices. With packaging and playlist / manifest file generation driven by MainConcept, broadcast production workflows are easily able to extend to OTT delivery. Together with MainConcept Network Streaming Client and Server SDKs, STRYME provides a complete video server platform that can send and receive content over the internet to fulfill the requirements of any broadcaster.

STRYME's selection of MainConcept as its major audio/video technology provider is backed by the ideal interaction of broadcast-quality and performance. The professional support of the global MainConcept Customer Care department allowed the STRYME engineering team to focus on their main mission of developing the GENESIX high-end video server and broadcast automation system.

MainConcept's codec collection is unrivaled in the broadcast market with no other supplier offering a similar library of high-end encoders, decoders, multiplexers, demultiplexers and streaming clients and servers. For STRYME, MainConcept delivers the right set of codecs and formats. MainConcept SDKs are the driving force behind handling nearly any stream or file that is processed in the GENESIX Video Server V9.

STRYME does not restrict the usage of MainConcept SDKs to its GENESIX Video Server but plans to extend its "Everything Ingest" motto to the TUBICON and BRODSTAR solutions for encoding, decoding and streaming functionality. In parallel, STRYME will regularly update the current status quo to simplify workflows in the all-in-one video server. Transforming GENESIX into a future proof, all-round platform, for any video processing application is one of STRYME's big challenges. The end-user of the device should not worry about trivial matters like technical possibilities or compatibilities but be able to focus exclusively on the video content creation.

MainConcept is the reliable partner that develops industry-leading codec and streaming technologies for the broadcast and OTT market. With their unparalleled expertise in providing remarkable quality video and audio compression – MainConcept celebrated its 25th anniversary in 2018 – and is still the leading codec supplier for the professional market. The MainConcept team continues its mission of developing new encoder, decoder and streaming libraries, while further optimizing existing standards, so STRYME can take the next steps in its broadcast business by moving exciting solutions and services to the cloud.

## REQUEST A DEMO:



**STRYME GENESIX Video Server V9  
MAINCONCEPT SDKS**

Free evaluation downloads are available for testing.

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