

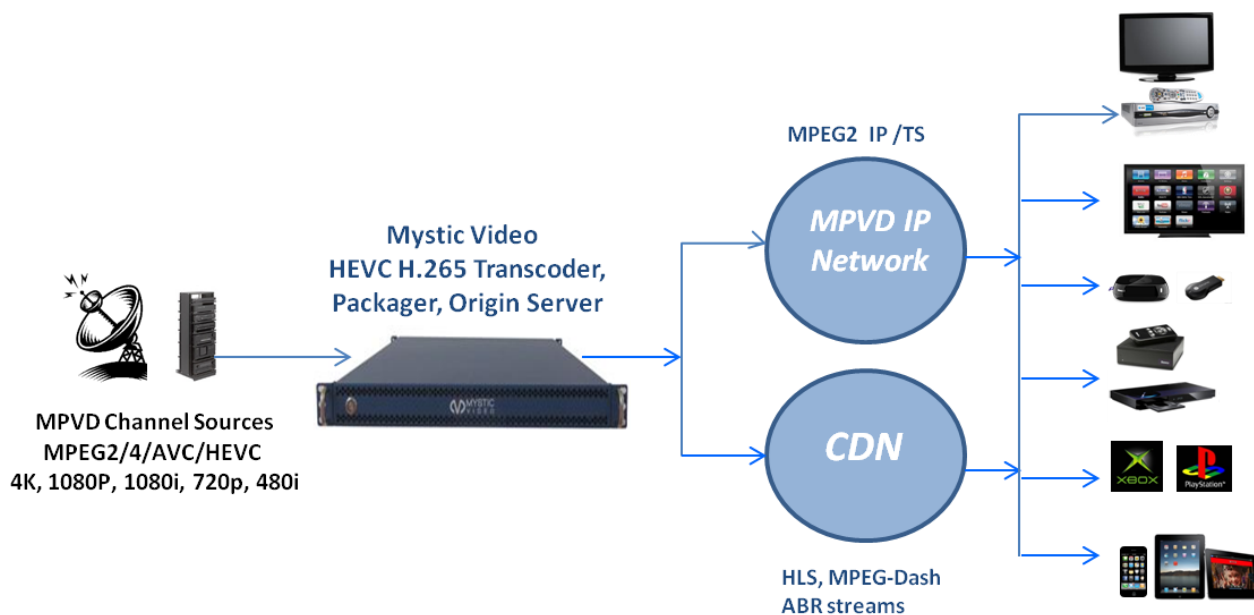
Transcoding for Evolving OTT and MPVD Video subscription services

Mystic Video's Unified Transcoding platform solutions are transforming live video processing for **MPVD's** (multi program video distributors) and emerging **OTT** (over the top) Video subscription providers by providing the highest video quality compression at market-leading pricing enabling the fastest ROI for the video providers' business case.

Mystic's HEVC/H.265 Video Transcoder and Streaming Video Origin Server architecture provides MPVD's the asset protection they require with support for all current and future video processing needs in one single solution. The Mystic transcoder platform provides all features needed by MPVD's and OTT providers such as transcoding, packaging, encrypting, linear and streaming capabilities.

The platform supports transcoding of programmer video feeds received by MPVD's into HD, SD and 4K resolutions compressed with HEVC/H.265. MPVD and OTT providers can use the platform features to rate shape, further compress video feeds, create additional output resolution sizes and prepare video into various packages of **Adaptive Bit Rate (ABR)** streams for delivery to its subscribers.

Mystic's HEVC H.265 Transcoders provide support for visual quality enhancements like **High Dynamic Range (HDR)** and **Wide Color Gamut (WCG)**. Furthermore, they also support **High Frame Rate (HFR)** which have benefits especially in high motion content, such as sports.



HEVC H.265 Transcoding

The Mystic HEVC H.265 Transcoding Modules are capable of transcoding any input of MPEG2, MPEG4 or HEVC H.265 video format into single and multiple HEVC H.265 compressed output resolutions. The 1 rack unit transcoder platform supports from one and up to four transcoder modules for a dense scalable HEVC channel and ABR streaming platform.

Each HEVC Transcoding Module Supports:

- Up to Four separate full HD 1080P60 inputs transcoded into one or more HEVC H.265 compressed outputs each.
- One full 4K 3840x2160P60 video inputs transrated or transcoded into one or more HEVC H.265 further compressed output resolutions of 4K, HD or SD.
- Provides support for High Dynamic Range (HDR), 10 bit encoding and SEI user data handling features.

Mystic Transcoder System:

- One to Four HEVC/H.265 Transcoder Modules per server each with:
 - Up to Four HD Inputs and Transcoded Outputs each with up to 5 ABR streams
 - One 4K Input and Transcoded Outputs each with multiple output ABR streams

Transcode/Transrate Densities per 1RU:

- Up to 16 Full HD inputs transcoded into compressed HEVC/H.265 outputs, with up to 5 ABR output streams each.
- Up to 4 full 4KP60 inputs transrated or transcoded into HEVC H.265 compressed outputs resolutions with up to 5 ABR output streams each.

Video Transcoding:

- MPEG2 ► Single or MultiRes/ABR HEVC/H.265
- AVC/H.264 ► Single or MultiRes/ABR HEVC/H.265
- HEVC/H.265 8 bit and 10 bit ► Single or MultiRes/ABR HEVC/H.265
- Down scaling 4K, HD ► HD, SD, PIP, Multiple Adaptive Bit Rate resolutions
- Bit rate: 100 Mbps ► 64 Kbps; CBR, VBR, Capped VBR
- Motion Adaptive HW Deinterlacing
- HDR, 10 bit encoding and SEI user data handling
- MPTS to SPTS

Audio Transcoding:

- AAC, AC3, AC3-E ► LC-AAC, HE-AAC, AC3-E, and pass-through audio

Input:

- IP Multicast MPEG2-TS

Output:

- MPEG-2 TS UDP unicast and multicast,
- HTTP Streaming (HLS, SS, HDS, MPEG-DASH) (with future Origin software option)

HTTP Packaging and Encryption (with future Origin software option)

- Smooth Streaming,
- HTTP Live Streaming (HLS),
- HTTP Dynamic Streaming (HDS),
- MPEG DASH

Network Interfaces:

- 4x GbE
- Optional 2x 10 GbE & 2x 10Gb SFP+

Power:

- 15W per transcode
- 220-240W Total per Server with four transcoder cards installed

HEVC Processor:

- Up to 4 HEVC H.265 Transcoder ASICs per unit

About Mystic Video

The Mystic team is comprised of veteran broadcast industry leaders whose products power many major Broadcast Operators' systems. Mystic's experience in digital video encoding and real-time system design produces solutions with the highest video quality, transcoding performance, and 24/7 operation.