CodecCaster 900 HD

Application areas

- Real-time transcoding of IPTV streams up to HD resolution
- Bandwidth reduction for Internet transmission
- Bandwidth reduction for streaming in wireless networks
- Stream adaptation for set-top boxes, tablets, mobile phones
- Multi-bitrate and multi-screen transcoding and transrating for adaptive streaming

CodecCaster is a turn-key solution for real-time transcoding of IPTV streams up to full HD resolution. It offers high-performance and high-quality IP-based format conversion, and fully supports transcoding to multiple bitrates for adaptive streaming. Video transcoding from MPEG-2 Video to AVC/H.264 for MPEG Transport Streams is provided, as well as transcoding from AVC/H.264 to MPEG-2 Video, or any other combination. The world-class encoder of CodecCaster allows for greatly reducing bandwidth requirements of streams while keeping the original quality of experience, which makes CodecCaster the perfect solution for Internet transmission or when streaming in wireless networks.

Additional options for stream adaptation, such as deinterlacing, video scaling, frame rate conversion, and audio sample rate and format conversion allow for serving set-top boxes, tablets, mobile phones, and others.

The number of streams to be transcoded in parallel is not artificially limited: Up to 9 different streams in full SD resolution can be transcoded in real-time with only a single 1U appliance, or even more when using downscaled streams.

Being compatible with existing gateways, conditional access systems, streaming servers, and set-top boxes, CodecCaster can be seamlessly integrated into your existing infrastructure.

▪ Transcoding	▪ Real-time transcoding of MPEG Transport Streams
	▪ Single Program Transport Stream (SPTS) to Single Program Transport Stream (SPTS)
	▪ IP input to IP output
	▪ Input: MPEG Transport Stream (MPEG-TS)
	  ▪ MPEG-2 Video
	  ▪ AVC / H.264 (also known as MPEG-4 Part 10)
	  ▪ MPEG Audio, AAC, ..
	▪ Output: MPEG Transport Stream (MPEG-TS)
	  ▪ MPEG-2 Video
	  ▪ AVC / H.264 (also known as MPEG-4 Part 10)
	  ▪ MPEG Audio, AAC, ..
	▪ Deinterlacing of video
	▪ Video up- or downscaling
	▪ Frame rate conversion

▪ Example Transcoding MPEG-2 SD to H.264 SD	▪ Input: Up to 9x MPEG-TS including MPEG audio in parallel MPEG-2 Video (720 x 576 pixel, 25 fps @ 5.0 Mbps) ▪ Output: Up to 9x MPEG-TS including MPEG audio H.264 576i25 (720 x 576 pixel, 25 fps @ 1.0 Mbps)
▪ Example Transcoding H.264 HD to MPEG-2 SD	▪ Input: Up to 4x MPEG-TS including MPEG audio in parallel H.264 1080i25 (1920 x 1080 pixel, 25 fps @ 10.0 Mbps) ▪ Output: Up to 4x MPEG-TS including MPEG audio MPEG-2 Video (720 x 576 pixel, 25 fps @ 4.0 Mbps)
▪ Example Transrating H.264 HD to H.264 HD (720p)	▪ Input: Up to 2x MPEG-TS including MPEG audio in parallel H.264 720p50 (1280 x 720 pixel, 50 fps @ 12.0 Mbps) ▪ Output: Up to 2x MPEG-TS including MPEG audio and H.264 720p50 (1280 x 720 pixel, 50 fps @ 4.0 Mbps)
▪ Example Transrating H.264 HD to H.264 HD (1080i)	▪ Input: Up to 2x MPEG-TS including MPEG audio in parallel H.264 1080i25 (1920 x 1080 pixel, 25 fps @ 10.0 Mbps) ▪ Output: Up to 2x MPEG-TS including MPEG audio H.264 1080i25 (1920 x 1080 pixel, 25 fps @ 4.0 Mbps)
▪ Example Multi-bitrate Multi-screen MPEG-2 SD to H.264	▪ Input: Up to 5x MPEG-TS including MPEG audio in parallel MPEG-2 Video (720 x 576 pixel, 25 fps @ 5.0 Mbps) ▪ Output: Up to 5x3=15 MPEG-TS including AAC audio H.264 576i25 (720 x 576 pixel, 25 fps @ 1.00 Mbps) H.264 PAL/2 (366 x 288 pixel, 25 fps @ 0.30 Mbps) H.264 QCIF (176 x 144 pixel, 25 fps @ 0.15 Mbps)
▪ IP Streaming	▪ 2x 1000 BaseT Gigabit Ethernet ▪ 1x Mgmt (Management and Streaming) ▪ 1x GbE (Streaming only) ▪ Protocols: ▪ Unicast / Multicast / Broadcast ▪ UDP
▪ Administration	▪ Linux system (kernel 3.x) ▪ Web interface (http/https), ssh, integrated LCD panel
▪ Free Software Developer Kit (SDK)	▪ All control and monitoring options of the Web interface available as C++ API (Windows, Linux, Mac OS X), PHP, or XML-RPC (all platforms) ▪ Client-side sample application ▪ Based on award winning Network-Integrated Multimedia Middleware (NMM) by Motama
▪ Hardware	▪ 1 U, 19" rack mountable ▪ 1x HDD 3,5" (24/7) ▪ 2 GB main memory ▪ VGA ▪ Height x Width x Depth ▪ 43 mm (1.7") x 426 mm (16.8") x 356 mm (14.0") ▪ Voltage: 100V – 240V AC, 50-60 Hz ▪ Weight: 6 kg ▪ Power consumption: ▪ < 6 W (standby), 40 W (idle) to 120 W (loaded) ▪ High-quality server appliance assembled in Germany

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