



## High Quality, Low Latency, Real-Time MPEG-2, H.264 & HEVC Video Transcoder

**High Performance, Low Latency Transcoding** The Haivision Kraken™ transcoder is designed for high performance live video transcoding from MPEG-2/H.264/HEVC to MPEG-2/H.264/HEVC, shaping mission-critical video streams for backhaul via constrained datalinks. Kraken supports end-to-end real-time video delivery from diverse video sources and distribution networks, offering superior quality at low bitrates. Within the enterprise, the Kraken redistributes high bandwidth broadcast TV streams over local area networks for viewing on desktops and set-top boxes. The Kraken equipped with the KLV option provides low latency transcoding for metadata-rich applications, such as military intelligence, surveillance, and reconnaissance (ISR) full motion video (FMV) applications.

**High Quality, Low Bandwidth Broadcast TV Stream Distribution** The Kraken prepares broadcast TV streams (MPEG-2/H.264) for distribution across enterprise networks and to viewing devices that are not designed to accommodate high bandwidth and highly volatile streams. As broadcast TV streams are bandwidth intensive, enterprise network resources can become congested, as well as computer processing resources at the edge. The Kraken enables a seamless, secure and manageable multicast framework by standardizing diverse streams sourced from various encoders in preparation for distribution on networks connecting devices of disparate capabilities.

**Kraken ISR - Performance Transcoding with Metadata** In the world of ISR, systems are designed to collect, process, and disseminate information. Many FMV applications bundle additional information with video streams in the form of metadata, typically in MISP-compliant KLV (Key-Length-Value) format. The Kraken ISR is specifically optimized for the task of disseminating information in a format required by downstream networks, exploitation systems, and viewers with the lowest possible delay while preserving metadata with frame accurate synchronization.

### Product Features

### Product Benefits

|   |  |
|---|--|
| <b>High Performance IP Transcoding</b>        | Delivers mission-critical information with lowest transcoding latency                                    |
| <b>HEVC, H.264 &amp; MPEG-2 Input Options</b> | Adapted to the challenges of ISR and broadcast TV stream redistribution                                  |
| <b>Software or Appliance Based</b>            | Solution choices available to best meet customer needs   |
| <b>Transport Stream Shaping</b>               | Set maximum bitrate - prevent streams from overpowering network  |
| <b>Metadata Pass-Through</b>                  | Preserves EIA-608/708 CC data and Synchronous/Asynchronous MISP - compliant KLV metadata                 |
| <b>REST API/Web User Interface</b>            | Enables adoption into customer specific workflows or use the provided Web-based user interface           |
| <b>Session Announcement Protocol</b>          | Automatically announce the streams to the players, providing automatic notification of available streams |
| <b>Encoder Control/Multiple Output</b>        | Adjust output stream resolutions, bitrates and frame rates or bypass the transcoder                      |
| <b>Available as Software-only</b>             | Deploy on existing virtualized infrastructure or pack in smaller packages for mobile deployments         |

**KRAKEN TRANSCODING SPECIFICATIONS**

*Sources:*

- Makito, Piranha Encoders
- 3rd Party Encoders
- MJPEG from L-3 Vortex
- Broadcast TV streams

*Input H.265/HEVC:*

- Main Profile
- Up to Level 4 (1080p30)
- Transport Stream, SRT or RTSP
- Up to 10 Mbps
- CBR, VBR

*Input H.264/AVC:*

- Baseline, Main, High Profile
- Up to Level 4.2 (1080p60)
- Transport Stream, SRT or RTSP
- Up to 20 Mps
- CBR, VBR

*Input MPEG-2:*

- MainProfile@MainLevel (SD)
- MainProfile@HighLevel (HD)
- Transport Stream
- Up to 20 Mbps
- CBR, VBR

*Input Audio:*

- MPEG1 layer 2
- AAC 2 channel and 5.1

*Output H.265/HEVC:*

- Main Profile
- Up to Level 4 (1080p30)
- Transport Stream or SRT
- Up to 10 Mbps
- Transport Stream Shaping, VBR

*Output H.264:*

- Baseline, Main, High Profile
- Up to Level 4.2 (1080p60)
- Transport Stream or SRT
- Up to 20 Mps
- Transport Stream Shaping, VBR

*Output MPEG-2 Video:*

- Simple and Main Profile@MainLevel
- Up to 10 Mbps
- Transport Stream Shaping, VBR

*Output ACC Audio:*

- AAC 2 channel
- Audio Sync Preserved

*Output MPEG-1 Audio:*

- 2 Channel MPEG-1 Layer II
- Audio Sync Preserved

*Metadata Pass-through (Supported Standards):*

- Closed Captioning (EIA-608 & EIA-708)
- KLV with support of both Asynchronous and Synchronous KLV
- Support of MISB Standard 0601
- Support of MISB Standard 0604
- SMPTE 336M-2007 Data Encoding Protocol

**VIDEO PROCESSING**

- De-interlacing
- Down Scaling
- Aspect Ratio Preserved
- Configurable Frame Rate

**NETWORKING**

- Single Program Transport Stream (SPTS)
- Unicast/Multicast (IGMPv3)
- TS over UDP
- Session Announcement (SAP)

**MANAGEMENT**

- Web User Interface (HTTPS only)
- REST API
- Console UI

**KRAKEN TRANSCODING SYSTEM**

*Operating System:*

- Software-only for Linux or appliance form factor

*Standard IP Interfaces:*

- 2 x RJ-45 Ethernet

**KRAKEN BASE SYSTEM (S-KR-BASE)**

*Capacity:*

- Up to 2 x HD H.264/AVC encoding channels only (no H.265/HEVC encoding)

*Weight:*

- 17.76 lbs / 8.06 kg

*Dimensions without faceplate (1RU):*

- H: 1.66" (42.4 mm) W: 17.09" (434 mm) D: 15.52" (394.3 mm)

*Power:*

- 1 x Non-Redundant 100-240 VAC 250 W Power Supply

**KRAKEN PREMIUM SYSTEM (S-KR-PREMIUM)**

*Capacity:*

- Up to 8 x HD H.264/AVC encoding channels
- Up to 2 x HD H.265/HEVC encoding channels

*Weight:*

- 43.87 lbs / 19.9 kg

*Dimensions without faceplate (1RU):*

- H: 1.68" (42.8 mm) W: 17.09" (434 mm) D: 23.9" (607 mm)

*Power:*

- 2 x Redundant 100-240 VAC 550 W Power Supplies

**KRAKEN ULTRA SYSTEM (S-KR-ULTRA)**

*Capacity:*

- Up to 16 x HD H.264/AVC encoding channels
- Up to 4 x HD H.265/HEVC encoding channels

*Dimensions without faceplate (1RU):*

- H: 1.68" (42.8 mm) W: 18.98" (482.3 mm) D: 27.6" (700.5 mm)

*Power:*

- 2 x Redundant 100-240 VAC 750 W Power Supplies

**Kraken Product Portfolio & Ordering Information \*\***

**Kraken Base Dual Channel**  
*with KLV Metadata Support*

**S-KR-BASE**  
*S-KR-BASE-KLV*

**Transcoding system** - Low latency, transport stream. H.264/HEVC in, H.264 out. 2xHD/4xSD H.264 out. Short depth, 1U Server.

**Kraken Premium 8 Channel**  
*with KLV Metadata Support*

**S-KR-PREMIUM**  
*S-KR-PREMIUM-KLV*

**Transcoding system** - Low latency, transport stream. H.264/HEVC in/out. 2xHD/4xSD HEVC out or 8xHD/16xSD H.264 out. 1U Server.

**Kraken Ultra 16 Channel**  
*with KLV Metadata Support*

**S-KR-ULTRA**  
*S-KR-ULTRA-KLV*

**Transcoding system** - Low latency, transport stream. H.264/HEVC in/out. 4xHD/8xSD HEVC out or 16xHD/32xSD H.264 out. 1U Server.

\*\* For complete pricing and ordering, contact us at sales@haivision.com or your certified Haivision reseller.