Features

- Supports both HD and SD MPEG-2 transcoding with “virtual” stream replication
- Inputs: One GigE IP input
- IP Output protocols: UDP or RTP via unicast or multicast
- Encoding bit rates: .1 to 15 Mbps
- Supports closed captioning
- Supports logo insertion, text overlay, and SCTE 35 compliant cue tone insertion ("ad markers") on outputs
- Able to upconvert incoming SD streams to HD, and scale down
- Tested with leading CDNs (Verizon®, Akamai®, Tulix™, Ustream®, etc.)
- Supports Octoshape™ and Verizon® upLynk natively
- Supports 1080i, 1080p, 720p, 480i, 480p, CIF, QCIF, qHD, H.264up and many others, and custom resolutions
- Support for Variable Bit Rate (VBR) encoding maximizes adaptive streaming video quality and bandwidth efficiency
- Tested to work with Atlas™, Wowza®, and Adobe® Flash® media servers
- Tested compatible with major brands of IP devices including Amino™, Roku®, and Telergy™
- Tested compatible with major brands of professional MPEG-2 decoders
- Remote GUI includes some scheduling
- SNMP, REST, SOAP support for remote management and monitoring
- Low power consumption

Overview

MPEG-2 is the traditional encoding methodology for North American and European broadcast and cable. It supports both MPEG-1 Layer 2 and AC-3 audio.

The compact JimBox MP2 IP/IP™ is a dedicated appliance designed primarily to add or remove AC-3 L/R or 5.3 to or from MPEG-2 streams.

The JimBox is a member of our “glue” product family which can alter transport streams in non-traditional ways.

AC-3 is an audio compression standard adopted in North America to compress PCM data streams at between 32 kbps and 640 kbps. With AC-3, a 5 channel PCM stream can be compressed to 384 kbps.

MPEG-1 Layer II, also known as MPII Layer II, is defined by ISO/IEG 11172-3 and supports 32-384 kbps. Broadcasters worldwide compress their audio between 256 kbps and 384 kbps. It is used by the broadcasting industry for distribution live audio over satellite and IP connections. It is also used in DVD recorders.

Applications

- Adjusting MPEG-2 payloads by changing bit rates, etc.
- Adding Dolby® audio to MPEG-2 transport streams
Specifications

**Supported Resolutions – Input and Output**

<table>
<thead>
<tr>
<th>Resolution</th>
<th>IP Input</th>
<th>IP Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>1920 x 1080</td>
<td>720 x 480</td>
<td>One 1080 i/p and one 720p HD stream, at 6 Mbps; or 4 720p60 HD streams at 4 Mbps, or eight SD streams at 2 Mbps</td>
</tr>
<tr>
<td>1280 x 720</td>
<td>704 x 480</td>
<td>Audio Output: “SurCode for Dolby Digital” AC-3</td>
</tr>
<tr>
<td>720 x 576</td>
<td>640 x 480</td>
<td>Output Protocols: UDP, RTP</td>
</tr>
<tr>
<td>720 x 480</td>
<td>480 x 320</td>
<td>Type: IP-multicast, IP-unicast</td>
</tr>
<tr>
<td>640 x 480</td>
<td>320 x 240</td>
<td>Bit Rates: Multiple MPEG-2 video transport streams at different bit rates (.1 to 15 mbps)</td>
</tr>
<tr>
<td>480 x 480</td>
<td>480 x 320</td>
<td>Video: NTSC or PAL</td>
</tr>
<tr>
<td>480 x 320</td>
<td>480 x 320</td>
<td>Encoding Latency: About 1.2 seconds (fixed)</td>
</tr>
<tr>
<td>320 x 240</td>
<td>320 x 240</td>
<td></td>
</tr>
</tbody>
</table>

Also supports any custom resolution not listed here. Note: Supports closed captions.

**IP Input**

- Protocols: UDP, RTP

**IP Output**

- Outputs: One 1080 i/p and one 720p HD stream, at 6 Mbps; or 4 720p60 HD streams at 4 Mbps, or eight SD streams at 2 Mbps
- Protocols: UDP, RTP
- Type: IP-multicast, IP-unicast
- Bit Rates: Multiple MPEG-2 video transport streams at different bit rates (.1 to 15 mbps)
- Video: NTSC or PAL
- Encoding Latency: About 1.2 seconds (fixed)

**Administration**

- Access: Web interface, SSH (Secure command line interface)
- SNMP: Monitoring and alerts
- Scheduling: On, Off support for timeslots

**CPU and Operating System**

- CPU: Intel® Core I3
- OS: DVEO embedded Linux® on SSD
- Hard Drive: 8 GB RAM
- Memory: 120 GB SSD Intel

**Physical & Power**

- Size (W x D x H): 7.5 x 6.5 x 1.7 inches (190 x 165 x 43 mm)
- Weight: 3 lbs. (1.36 kg)
- Shipping Weight: 5 lbs. (2.27 kg)
- Power: External 90W fanless power adapter
- Input: 100–240V AC, 50/60 Hz; Output: 19V DC, 4.74A
- Power Consumption: Maximum 90 watts
- Operating Temperature: ⁰C to 50°C
- Processor Cooling: Heat pipe processor cooling with two 60 mm fans on the upper side of the chassis
- Relative Humidity: 10% to 90% non-condensing
- Conformities: UL, BSMI, FCC, CE, RoHS, C-Tick, CB, ETL

**Security**

- Ports security scanned to MIL requirements prior to shipment

**Ad Insertion**

- SCTE Ad Marker insertion via RS232, USB, IP, Contact closures

**CDNs Tested With:**

1. Akamai*
2. Limelight
3. Tata
4. Octoshape
5. CDNetworks
6. Internap
7. Highwinds
8. Verizon*
9. Ustream*
10. Mirror Image
11. Tulix*
12. More to come!

*Certified