Features

- Supports both HD and SD H.264/MPEG-4 AVC encoding with "virtual" stream replication
- Inputs: Four DVB-S or DVB-S2 inputs (option for decryption available), one GigE IP input
- Supports NewTek™ NDI® input
- Outputs: Multiple simultaneous IP streams through GigE port (RJ45) – Four 1080i/p streams, or 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
- IP output protocols: UDP, RTP, HTTP, HTTP Live (HLS), RTMP (Open Flash)
- Certified by Akamai®
- Supports HLS (adaptive) for output to mobile devices and MPEG-DASH
- Supports logo insertion, text overlay, and SCTE 35 compliant cue tone insertion ("ad markers") on outputs
- Web GUI is manageable from anywhere – includes some scheduling
- 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 H.264 High Profile @ Level 4.0 (HP@L4)
- Supports 1080i, 1080p, 720p, 480i, 480p, CIF, QCIF, qHD, H.264up and many others, and custom resolutions
- Supports 50 HLS users natively. Optional built-in server supports 1,000+ simultaneous HLS, DASH, and/or RTMP users.
- Audio Output: AAC, MPEG-1 Layer II, optional MP3, MPEG-1 Layer II, and/or optional “SurCode for Dolby Digital” AC-3
- 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®, Telergy, Android™, and Apple iPad® and iPhone®
- Tested compatible with major brands of professional H.265, H.264, and MPEG-2 decoders and video servers
- SNMP, REST, SOAP support for remote management and monitoring
- Relies on Intel® Xeon® processor
- Optional local storage

Overview

The MultiStreamer™ is a family member of our flagship cost effective origin encoders. This family has been in production for seven years and we have shipped over 3,000 units. It is designed as a general purpose workhorse, able to stream several simultaneous streams at different resolutions with any streaming protocols.

The MultiStreamer DVB-S-S2 4 Tuners/IP: Professional is a highly affordable multi channel satellite to IP gateway and H.264 transcoder. It receives a mixture of DVB-S or DVB-S2 transport streams from one to four satellite transponders, simultaneously, then transcodes the DVB-S/S2 to H.264 or optional H.265 and provides for choices for protocols, wrappers, and containers. The system streams the IP output to STBs, iPads, iPhones, content delivery networks, and remote video capture devices.

The MultiStreamer DVB-S-S2 4 Tuners/IP: Professional is designed to ingest video from satellite transponders, transcode the MPEG-2 to the H.264 standard, and provide for choices for resolutions, protocols, wrappers, and containers. This is easy to do since we are using Linux® and these outputs are well supported by the Linux® environment.

Inexpensive high volume hardware platforms combined with highly enhanced open source Linux® based software offer great value to all willing to embrace the future. We offer high performance streaming solutions that are based on open source libraries. We enhance the libraries by rewriting critical sections to obtain outstanding reliability and throughput.

This unit is designed to be affordable, scalable, and extendable. Modifications to video formats are easily created. Remote management and multi level security is built in.

Applications

- Satellite to IP gateways for IPTV
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

Specifications

Supported Resolutions – Input and Output

<table>
<thead>
<tr>
<th>Resolution</th>
<th>1920 x 1080</th>
<th>1280 x 720</th>
<th>720 x 576</th>
<th>480 x 320</th>
<th>320 x 240</th>
<th>qHD</th>
<th>H.264up</th>
</tr>
</thead>
</table>

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

Note: Supports PAL TO NTSC conversion but not NTSC to PAL.

H.265 output resolutions supported are 1080, 720, 576, 480.

H.265 576/480 resolutions only have 4:3 aspect ratio.

DVB-S/S2 Input

- Modulation: QPSK (DVB-S), 8PSK (DVB-S2), 16APSK (DVB-S2)
- Inputs: Four Inputs – L-Band, K-Band, Ku Band, etc.
- Symbol rate: 1 to 45 MS/s
- Frequency range: 950 to 2150 MHz, 70 to 1002 MHz
- LNB control: 22 kHz, power H/V
- Spectral inversion: ON/OFF/AUTO
- Maximum raw throughput: 400 mbps

IP Input


IP Output

- Outputs: One 1080i/p stream at 6 Mbps; or one 720p60 HD stream at 4 Mbps; or 3 480 streams at 2 Mbps, or one HD and one SD stream at 6 Mbps
- Audio Output: AAC, MPEG-1 Layer II, optional MP3, MPEG-1 Layer II, and/or optional “SurCode for Dolby Digital” AC-3
- Output “wrappers”: UDP, RTP, HTTP, HTTP Live (HLS), RTMP (Open Flash)
- Type: IP-multicast, IP-unicast with “wrappers”
- Bit Rates: Multiple H.264 video streams at different bit rates (1 to 15 mbps), resolutions, and protocols, wrappers, and containers
- Optional H.265: H.265 average bit rate supported. No constant or variable.
- Quality: 8 or 10 bit encoding with 4:2:0 color sampling
- Video: NTSC or PAL
- Encoding Latency: 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® Xeon® processor
- OS: DVEO embedded Linux® on SSD
- Hard Drive: 1 TB (Option)

Physical & Power

- Size: 1 RU (W x D x H): 19 x 14.96 x 1.7 inches (483 x 380 x 43.4 mm)
- Voltage: 100-240V, 4-2A, 60-50 Hz, 220 watts
- Operating Temperature: 10°C to 35°C
- Non-operating Humidity: 20% to 90% non-condensing
- Weight: 15 lbs. (6.8 kg)

Conformities:

- UL, BSMI, CSA, FCC, CE, RoHS

Security

- Ports security scanned to MIL requirements prior to shipment

Ad Insertion

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