### Features

- Supports both HD and SD H.264/MPEG-4 AVC encoding and decoding -- optional H.265 available
- Inputs: Two SDI/HD-SDI inputs or outputs with IP in or out
- Two optional HDMI inputs/outputs instead of SDI/HD-SDI inputs/outputs
- Supports NewTek™ NDI® input
- IP Outputs: Multiple simultaneous IP streams through GigE port (RJ45), SDI or HD-SDI video loop through
- IP protocols: UDP, RTP, HTTP, HTTP Live (HLS), RTMP (Open Flash)
- Certified by Akamai®
- Supports HLS (adaptive) for output to mobile devices and MPEG-DASH
- Security scanned for vulnerabilities
- Supports logo insertion, text overlay, and SCTE 35 compliant cue tone insertion ("ad markers") on IP 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 608 and 708 Closed Captioning
- Supports H.264 High Profile @ Level 4.0 (HP@L4)
- Supports 1080i, 1080p, 720p, 576i, 480i, 480p, CIF, QCIF, qHD, H.264up and many others, and custom resolutions
- IP output supports 50 HLS users natively. With optional built-in server, IP output supports 1,000+ simultaneous HLS, DASH, and/or RTMP users.
- Audio Output: AAC, MPEG-1 Layer II, optional MP3, and/or optional "SurCode for Dolby Digital" AC-3
- Support for Variable Bit Rate (VBR) encoding maximizes adaptive streaming video quality and bandwidth efficiency
- SNMP, REST, SOAP support for remote management and monitoring
- Option: Supports Streaming Live and to Local HD or SSD via STREAMBUCKET™ option

### Summary

Real time, professional grade, 1 RU, quick starting, standards compliant, embedded Linux® based, remotely manageable, SD or HD digital video and audio streaming and de-streaming appliance with HLS or RTMP out. Runs on an Intel® Xeon® CPU. Input can be either SDI, HD-SDI, or optional HDMI. Application runs on a "Minimal" UBUNTU Linux® kernel. A friendly management user interface (GUI) is used for setup and configuration and can be run from anywhere via the public internet. Different configurations are savable at any time.

The MultiStreamer BD HD-SDI/IP DUO: Professional is a two channel bidirectional SD HD encoder/decoder/streamer for two way communications in real time, with a one second end to end delay. IP output supports closed captioning and teletext with overlay.

With the Intel® Xeon® processor we can encode and decode HD streams at different resolutions. Each stream can have several proxies with different "Wrappers" such as HLS, RTMP, etc. Audio output is AAC, MPEG-1 Layer II, optional MP3, and/or optional "SurCode for Dolby Digital" AC-3. Each stream is encoded with Medium Profile H.264 at .1 to 15 Mbps, or optional H.265. The unit can also redirect copies of outbound streams to multiple locations without extra CPU overhead. Supports stream scheduling and archiving option. Software is scanned for vulnerabilities and open ports. IP Output supports 50 simultaneous HLS Users. With optional Atlas™ add-on, IP output supports 1,000 RTMP, DASH, and/or HLS users natively.

### Overview

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

- 24x7 Unattended Streaming Device for CDNs and media servers
- Streaming or receiving video via CDNs and Ustream®, Akamai®, Octoshape™, Verizon®
- Backhaul/Monitoring for Broadcasters
- Military, Corporate Video, Religious Services, Special events via Bidirectionality
- Origin Encoder for Grooming Servers
- Event streaming via ISPs or CDNs
- Streaming and d-streaming at the same time
Ports Utilized

<table>
<thead>
<tr>
<th>Protocol</th>
<th>TCP Ports</th>
<th>UDP Ports</th>
</tr>
</thead>
<tbody>
<tr>
<td>HTTP</td>
<td>80, 8000, 8001, 8080, 1-65535 (out)</td>
<td></td>
</tr>
<tr>
<td>HTTPS</td>
<td></td>
<td>443</td>
</tr>
<tr>
<td>RTSP (Input only)</td>
<td>554, 7070, 6970-7170, 5005</td>
<td>1935</td>
</tr>
<tr>
<td>RTP</td>
<td></td>
<td>6970-6999, 16384-32767</td>
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