**Features**

- **Input:** One GigE IP input (H.265, H.264, MPEG-2, or VC-1) – UDP, RTP, RTSP, HTTP, HTTP Live, RTMP (pushed from Flash server)
- **Supports NewTek™ NDI® input**
- **Outputs:** Multiple delayed simultaneous IP streams (MPEG-2, H.264, or H.265) – HTTP Live (HLS), HTTP, UDP, RTP, RTMP (Open Flash), or multicast and unicast with transport stream envelope
- **Capable of pulling the source streams over IP (UDP, RTP, RTMP, adaptive, or HTTP)**
- **Supports up to 1.5 TB of storage for time delay – over 30 days of programming, depending on stream resolutions**
- **Can store and forward (perform time delay) on 40 independent IP streams at the same time**
- **Supports multiple outputs at different time delays per single input**
- **Accurate to the second on multi-hour delays**
- **Simultaneously reads and writes with “on the fly” adjustment of delay time**
- **Resolutions:** SQVGA, QCIF, QVGA, CIF, or any custom size up to 1080p
- **Supports SD or HD input**
- **Up to 1080p HD output**
- **Tested compatible with major brands of IP devices including Amino™, Roku®, Telergy, Android™, and Apple iPad® and iPhone®**
- **Audio support:** AAC, MPEG-1 Layer II, optional MP3, and/or optional “SurCode for Dolby Digital” AC-3
- **Settings are remembered when power cycled**
- **Based on embedded Linux®**
- **SNMP, REST, SOAP support for remote management and monitoring**
- **Relies on Intel® Xeon® processor**
- **Time calibration via NTP**
- 2 types of delay: IP delay via hard drive in 1 second steps with 10 second minimum, or IP Delay via output buffering in 1 ms steps up to 10 seconds

**Overview**

Transport streams are packetized MPEG video streams. They are used to stream video to the myriad of devices that are now connected to the Internet. IP based video streaming is now becoming the prevalent methodology of distributing video. Real time streaming video is perfect for most applications, but in some cases delaying a stream is desired.

Time delay of video streams is very attractive when the content is coming from a totally different time zone. In such cases, programming created for morning or evening showing is going to attract more interest when shown at the correct time.

The **DelayServer IP™** is a delaying server that re-streams 40+ MPEG-2 or H.264 IP transport streams and plays them back after a delay that is finely adjustable from seconds to days. Capture and playback can be simultaneous on multiple streams. Interestingly the delay time can be adjusted “on the fly” by the user. Delay capability is primarily set by storage capacity. We employ solid state drives as primary storage.

The more powerful Delay Server IP: TELCO is equipped with dual redundant power supplies and dual 10 Gig ports. IP throughout can exceed 10Gbps.

**Applications**

- **Accurate Transport Stream time delay for webcasting across multiple time zones**
- **Over 30 days of Back Up and playback of all channels for Network Operations (N.B. at low rates and disk dependent)**
- **IP lip sync delay**
- **IP stream synchronization for failover switching**
Specifications

IP Input

IP Output
- Ethernet: Up to 2 x 1 GigE
- Audio Output: AAC, MPEG-1 Layer II, optional MP3, 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
- Output bit rates: Multiple H.264, MPEG-2, and/or H.265 video streams at different bit rates (.1 to 15 mbps)
- Quality: 8 bit encoding with 4:2:0 color sampling
- Video: NTSC or PAL

Administration
- Access: Web interface, SSH (Secure command line interface)
- SNMP: Monitoring and alerts

CPU and Operating System
- CPU: Intel® Xeon® processor
- SNMP: DVEO embedded Linux® on SSD
- Hard Drive: 1 TB (Option)

Physical & Power
- Size – 1 RU high: 19 x 14.96 x 1.7 inches (W x D x H)
  483 x 380 x 43.4 mm (W x D x H)
- Voltage: 85-265 VAC/50-60Hz, 50 watts
- Temperature: 0°C to 50°C
- Humidity: 5% to 95% 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

Note: Solid State drives need to be replaced every 2-3 years.

Storage Requirements for Delay Server IP-IP

<table>
<thead>
<tr>
<th>Number of Streams</th>
<th>Stream Size Total</th>
<th>Delayed</th>
<th>SSD Storage</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>50 Mbps</td>
<td>10 Hours</td>
<td>440 GB</td>
</tr>
<tr>
<td>10</td>
<td>100 Mbps</td>
<td>10 Hours</td>
<td>880 GB</td>
</tr>
<tr>
<td>20</td>
<td>200 Mbps</td>
<td>10 Hours</td>
<td>1.76 TB</td>
</tr>
<tr>
<td>5</td>
<td>50 Mbps</td>
<td>24 Hours</td>
<td>1.056 TB</td>
</tr>
<tr>
<td>10</td>
<td>100 Mbps</td>
<td>24 Hours</td>
<td>2.112 TB</td>
</tr>
<tr>
<td>20</td>
<td>200 Mbps</td>
<td>24 Hours</td>
<td>4.224 TB</td>
</tr>
</tbody>
</table>

Storage Chart (10 Mbps/ Stream)

LAN     | WAN
( Either can be Used for IP )

In lieu of bulky RAID systems we write to Intel SSD Drives...

Ordering Information

DelayServer IP – Standard system with 250 GB SSD Storage
DelayServer IP/2 TB – Optional 1 TB SSD Storage
DelayServer IP/1.5 TB – Optional 2 TB SSD Storage
DelayServer IP/1 TB: TELCO – Telco version with dual power supply and 2 ea 10 Gig Port

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