**Features**

- **Inputs:** Two SDI or HD-SDI inputs
- **Outputs:** Encodes two high quality 1 to 50 Mbps H.264 1080p or H.265 720p streams
- **Supports H.264 High Profile @ Level 4.0 (HP@L4)**
- **Encoding latency:** 150 milliseconds
- **8 or 10 bit encoding with 4:2:2 or 4:2:0 color sampling**
- **Supports logo insertion, text overlay, and SCTE 35 compliant cue tone insertion ("ad markers") on outputs (SCTE 104 to SCTE 35)**
- **Supports DTMF tones and DTMF to SCTE 35 conversion**
- **Now includes optional stream archiving via 1-4 TB SSDS.**
- **Able to upconvert incoming SD streams to HD, and scale down**
- **Web GUI is manageable from anywhere – includes some scheduling**
- **Supports NTSC or PAL**
- **Supports HEVC main profile**
- **Encoding bit rates: .1 to 50 Mbps**
- **Supports 1080i, 1080p, 720p, 576i, 480i, 480p, CIF, QCIF, qHD, H.264up and many others, and custom resolutions**
- **IP output protocols:** UDP, RTP, and IGMP.
- **Expects embedded SDI audio**
- **Audio Output:** AAC, MPEG-1 Layer II, and/or optional AC-3
- **Up to 4 audio pairs for support of different languages**
- **Tested to work with ATLAS™ and Wowza® other industry media servers**
- **SNMP, REST or SOAP remote management**
- **Redundant (dual) power supplies, dual 1 gig Ports.**

**Quick starting, standards compliant, embedded Linux® based.** Incorporating a "minimal" Linux® kernel (residing on an SSD)- manageable from anywhere via web GUI.

**Supports closed captioning and teletext with overlay and SCTE 35 ad marker insertion. Supports most industry standard "protocols" like UDP or RTP and "Wrappers" such as HLS, RTMP, DASH, etc. Audio output is AAC, MPEG-1 Layer II, and/or optional “SurCode for Dolby Digital” AC-3.**

**Encodes one or two high quality H.264 1080p or H.265 720p streams at popular GOP sizes, frame rates, refresh rates, or aspect ratios. Software is scanned for vulnerabilities and open ports.**

**Operators can add logos to the streams, and can add SCTE 35 ad markers via SCTE 104.**

**Applications**

- News, satellite, and sports contribution
- Special events
- Military, Corporate Video, Religious Services,
- Origin Encoder for Grooming Servers
Overview

The PREMIO 4:2:2/H.264/H.265 is a premium quality low latency H.264 and H.265 encoder, able to encode video to mezzanine quality. It is designed for critical contribution applications and has many redundancy features.

The system can overlay logos, text, and closed captioning. It supports SCTE 35 triggers for ad insertion. A recently added feature is stream archiving.

Ordering options include DVEO's patented DOZER™ UDP packet recovery technology, for reliable video quality over the public internet and across long distances.

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

Inputs and Outputs

2 each 1 Gig Ports

Dual Power Supplies

2 each 10 GigE Ports

SDI/HD-SDI Inputs
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>443</td>
<td>1935</td>
</tr>
<tr>
<td>RTMP</td>
<td></td>
<td>6970-6999, 16384-32767</td>
</tr>
<tr>
<td>RTP</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Supported Resolutions

Supported Resolutions – Input and Output

<table>
<thead>
<tr>
<th>Resolution</th>
<th>Video Resolutions</th>
<th>Audio Resolutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1920 x 1080</td>
<td>720 x 480</td>
<td>AAC, MPEG-1 Layer II</td>
</tr>
<tr>
<td>1280 x 720</td>
<td>704 x 480</td>
<td>and/or optional “SurCode for Dolby Digital” AC-3</td>
</tr>
<tr>
<td>720 x 576</td>
<td>640 x 480</td>
<td>Output “wrappers”: UD, RTP, RTMP (Open Flash), HTTP, with DLNA support</td>
</tr>
<tr>
<td></td>
<td>480 x 320</td>
<td>Type: IP-multicast, IP-unicast with “wrappers”</td>
</tr>
<tr>
<td></td>
<td>320 x 240</td>
<td></td>
</tr>
</tbody>
</table>

Also supports any custom resolution not listed here.
Note: Does not support 608 closed captioning for SDI input. Only 708 is supported.
Note: Supports PAL TO NTSC conversion but not NTSC to PAL.

Options

- Optional DOZER™ Automated UDP Packet Recovery protocol, enabling error-free video delivery over UDP. DOZER ensures smooth MPEG-2, H.264, and H.265 delivery through DVEO patented algorithms for automated packet recovery and re-ordering of out-of-sequence packets.

Ordering Information

PREMIO 4:2:2/H.264/H.265 – HD-SDI In, 1 RU system

Specifications

Inputs

- Video: 2 SDI or HD-SDI inputs, NTSC or PAL
- Audio: SDI Embedded

SDI or HD-SDI Output

- Video Output: SDI or HD-SDI loop through for input monitoring

Video and Audio Compression

- Encoding: H.264/AVC and/or H.265/HEVC
- Bit Rates: Up to 50 mbps
- Quality: 8 or 10 bit encoding with 4:2:2 or 4:2:0 color sampling
- Video: NTSC or PAL
- Data Insertion: Logo insertion and text overlay SCTE 35 insertion via SCTE 104 triggers
- Encoding Latency: HD-SDI or SDI input: 150 milliseconds (fixed)

IP Output

- Outputs: One or two 1080i/p streams
- Audio Output: AAC, MPEG-1 Layer II, and/or optional “SurCode for Dolby Digital” AC-3
- Output “wrappers”: UD, RTP, RTMP (Open Flash), HTTP, with DLNA support
- Type: IP-multicast, IP-unicast with ”wrappers”

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: .5 TB SSD Default

Network

- Network: 2 each 10 Gig, 2 each 1 GB

Physical & Power

- Size (W x D x H): 19 x 20.5 x 1.75 inches (483 x 521 x 44 mm)
- Voltage: 00V-240Vac, 47-63Hz, 5-2.5A, 300 watts
- Operating Temperature: 0°C ~ 40°C (32°F ~ 104°F)
- Non-operating Temperature: -40°C ~ 70°C (-40°F ~ 158°F)
- Operating Humidity: 20% to 90% RH non-condensing
- Non-operating Humidity: 5% to 95% RH non-condensing
- Weight: 17 lbs. (7.7 kg)
- Redundancies: Dual power supplies, Port redundancies
- Memory: 32 GB DDR3
- 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