**Gearbox™ IP/ASI**

Real Time, 1 RU, Quick Starting, Standards Compliant, Embedded Linux® Based, Remotely Manageable, IP to ASI H.264/AVC or Optional H.265 to MPEG-2 Multi Stream Transcoder with Concurrent Multi Stream, Multi Resolution, Multi protocol IP Outputs. Audio Support for AAC, Embedded Pass-through, MPEG-1 Layer II, Optional MP3, and/or Optional “SurCode for Dolby Digital” AC-3. Encodes at .1 to 15 Mbps. Ideal for Simple Transcoding and Adding Wrappers and with Different Protocols.

### Features

- Supports both HD and SD H.264/MPEG-4 AVC or optional H.265/HEVC to MPEG-2 transcoding with “virtual” stream replication
- **Input:** One GigE IP input (H.264, MPEG-2, VC-1, or optional H.265) – UDP, RTP, RTSP, HTTP, HTTP Live, RTMP (pushed from Flash server)
- Supports NewTek™ NDI® input
- **Output:** One DVB-ASI output
- Receives HD and SD H.264/MPEG-4 AVC or optional H.265/HEVC transport streams over Ethernet-based Internet Protocol (IP) networks and converts them to MPEG-2 over DVB-ASI
- Web GUI is manageable from anywhere – includes some scheduling
- Able to upconvert incoming SD streams to HD, and scale down
- Can publish streams to cable head ends
- Supports H.264 High Profile @ Level 4.0 (HP@L4)
- Supports NTSC and PAL
- Supports 1080i, 1080p, 720p, 480i, 480p, CIF, QCIF, qHD, H.264up and many others, and custom resolutions
- **Audio output:** MPEG-1 Layer II and/or optional “SurCode for Dolby Digital” AC-3
- SNMP, REST, SOAP support for remote management and monitoring
- Relies on Intel® Xeon® processor

### Applications

- Simple transcode from H.264 to MPEG-2

### 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. Furthermore, Intel’s architecture is highly tuned to encoding and transcoding tasks. We offer high performance transcode solutions that are based on open source libraries. We enhance the libraries by rewriting critical sections to obtain outstanding reliability and throughput.

The Gearbox™ IP/ASI is a highly affordable Intel® Xeon® processor based multi channel IP to DVB-ASI scaler and transcoder designed for capturing IP content and transcoding and streaming this content via ASI.

The Gearbox IP/ASI is designed to be an affordable platform to ingest video from multiple IP transport streams, transcode H.264 or optional H.265 to the MPEG-2 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.

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.
### Specifications

#### Supported Resolutions – Input

<table>
<thead>
<tr>
<th>Resolution</th>
<th>Width</th>
<th>Height</th>
<th>Bitrate</th>
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<tbody>
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<td>qHD</td>
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<td>H.264up</td>
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Also supports any custom resolution not listed here. Note: Supports closed captions.

#### IP Input

- Bit rates: Multiple H.264, MPEG-2, and/or optional H.265 video streams at different bit rates (.1 to 15 mbps)

#### DVB-ASI Output

- Output: DVB-ASI, 200 Mbps
- Audio: MPEG-1 Layer II, Optional AC-3

#### 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

#### Physical & Power

- Size – 1 RU high: 19 x 4.96 x 1.7 inches (W x D x H)
- 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
- Conformities: UL, BSMI, CSA, FCC, CE, RoHS
- Weight: 15 lbs. (6.8 kg)

#### Security

Ports security scanned to MIL requirements prior to shipment

### Block Diagram

- Cloud
- IP IN – H.264
- QAM OUT
- QAM Signal
- ASI to QAM Modulator
- DVB-ASI (MPEG-2) OUT

### Ordering Information

Gearbox IP/ASI in 1 RU system