Features

- Tunes, decrypts, and converts content from 16 transponders.
- Input: DVB-S or DVB-S2 – Simultaneously receives transport streams from up to 16 satellite transponders.
- Each tuner can process all the streams within each of the tuned transponders, and unit can push 200+ IP streams at the same time.
- Conditional Access transparent for MDU market.
- IP Output: IP – UDP, RTP, HTTP.
- MPEG-2 inputs and outputs or H.264 inputs and outputs.
- Supports SD and HD formats.
- Incorporates PID filtering.
- 400 Mbps IP raw output capability.
- Transmits PAT, PMT, and PCR information in “stream all” mode.
- Remote configuration management via Web Browser and Secure Shell (SSH).
- Optional support for encrypted streams (CAM modules).
- Supports NTSC or PAL content.
- Based on embedded Linux®.
- For system with up to 15 Mbps IP transcoded H.264 or optional H.265 output capability, see Gearbox™ II DVB-S-S2 16 Tuners/IP.
- Available with optional DC Power Supply.

Applications

- IPTV Unicasting, Multicasting, Streaming.
- Telco TV.
- Front-end to VOD.
- Streaming to designated VideoLAN VLC or similar clients, or to Roku®, Amino™, or other set-top boxes.

Overview

The OnRamp DVB-S-S2 16 Tuners/IP™ is a professional DVB-S or DVB-S2 to IP Gateway that inputs a mixture of several satellite transponders and outputs them to an IP network. Resulting streams can be viewed with standard IP capable set-top boxes or streaming video software clients such as VLC or JW Player. It receives DVB compliant streams, demodulates the requested channels, and forwards these channels using UDP or RTP via IP networks as either IP multicast or IP unicast streams.

The OnRamp DVB-S-S2 16 Tuners/IP can receive transport streams from one to 16 satellite transponders, different satellites, simultaneously. The system supports MPEG-2 input and output or H.264 input and output. Forwarding of PIDs via IP is transparent and does not alter the content of each individual stream. The forwarded streams can be encrypted or unencrypted.

Depending on the configuration, it forwards selected programs via IP datacasting; PAT, PMT, video PID, audio PID(s) and PCR information are transmitted. The OnRamp DVB-S-S2 16 Tuners/IP selects all required PIDs and multiplexes the demultiplexed transport stream packets into IP packets.

Programs can be forwarded (pushed) as transport stream packets via UDP or as RTP (real time protocol) payload (RFC 2250). Pushing can be either unicast or multicast. Each individual converted program channel consists of all necessary elementary streams and clocking information to present a synchronized A/V signal.

The unit can perform PID filtering of all unwanted traffic, increasing system performance and the number of channels, which can be transmitted per unit. Often however, users just prefer to forward the incoming streams unaltered.

We also offer a similar system with the capability of transcoding the streams into H.264 format – see our Gearbox™ II DVB-S-S2 16 Tuners/IP.
Inputs/Outputs – Standard

DVB-S2 Inputs
IP In or Out
PS 1
PS 2
DVB-S2 Inputs

Sample GUI’s

Status Screen

Network Setup

Specifications

Supported Resolutions – Input and Output

<table>
<thead>
<tr>
<th>Resolution</th>
<th>720 x 480</th>
<th>480 x 480</th>
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</thead>
<tbody>
<tr>
<td>1920 x 1080</td>
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<td></td>
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<tr>
<td>1280 x 720</td>
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<td></td>
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<tr>
<td>720 x 576</td>
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<tr>
<td>720 x 480</td>
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<tr>
<td>640 x 480</td>
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<tr>
<td>480 x 480</td>
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<tr>
<td>480 x 320</td>
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<tr>
<td>320 x 240</td>
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</tbody>
</table>

Note: With transcoding option (Gearbox™ II), lower resolution results in higher transcodes.

Note: Supports closed captions.

DVB-S2 Input

Modulation: QPSK (DVB-S), 8PSK (DVB-S2), 16APSK (DVB-S2)
Inputs: 8 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
Maximum raw throughput: 400 mbps

IP Output

Output protocols: UDP, RTP, HTTP
Bit Rates: .1 to 15 mbps per individual channel
Ethernet: Two 10 GigE ports
Type: IP-multicast, IP-unicast
IP Modes: Parsed or unparsed streams

Administration

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

CPU and Operating System

CPU: Intel® Dual 16 Core processor
OS: DVEO embedded Linux® on SSD

Physical & Power

Size – 3 RU high: 19 x 5.25 x 25.2 inches (W x H x D)
48.26 x 13.34 x 64 cm (W x H x D)
Power Supply: 3U 760W – Redundant
Temperature Range: Operating: 0°C ~ +50°C on Full Load
Storage & Shipping: -20°C ~ +70°C
Non-operating Humidity: 5% to 95% non-condensing
Weight: 39 lbs. (17.69 kg)
Conformities: UL, BSMI, CSA, FCC, CE, RoHS

Security

Ports security scanned to MIL requirements prior to shipment

Transcode Option – Gearbox™ II DVB-S2 16 Tuners/IP

By utilizing an Intel® Dual 16 Core processor we can transcode up to:
104 SD Streams, or 40 720p60 HD streams, or 26 1080i/p HD streams

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.

Ordering Information

OnRamp DVB-S2 16 Tuners/IP – 3 RU, 1 to 16 S-S2 Receivers
OnRamp DVB-S2 16 Tuners/IP/DC – 3 RU, 1 to 16 S-S2 Receivers
With DC Power Supply and SPF with LC connector
OnRamp DVB-S2 16 Tuners/IP/ES – 2 RU with encrypted streams option
TC Option – Transcoding from MPEG-2 to H.264 – see Gearbox II

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