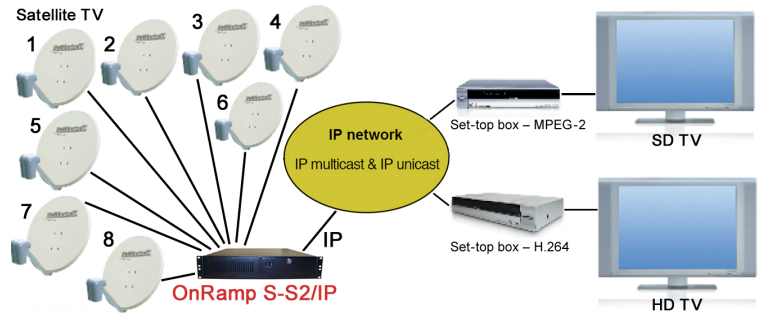


OnRamp S-S2/IP™

Professional Multichannel Linux® Based Satellite to IP Gateway that Integrates PC Bus Based Satellite Based Receivers and Demodulates and Routes Selected Transport Streams to Any MAC Address via IP. Can Work as a Low Cost “Catcher” in Small VOD Implementations. Typically the Desired Streams are Streamed in Real Time Using UDP, RTP, RTSP, RTMP, Adaptive, or HTTP via IP Multicast or Unicast Streams to IP Set Top Boxes (STB's) Such as Amino, or Designated VLC or MPlayer Equipped PC clients for Viewing.



Overview

The OnRamp S-S2/IP™ is a professional DVB-S or 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 MPlayer. OnRamp S-S2/IP receives DVB compliant streams, demultiplexes the requested channels and streams these channels using UDP, RTP, RTSP, RTMP, adaptive, or HTTP via IP networks as either IP multicast or IP unicast streams.

OnRamp S-S2/IP can receive transport streams from one to eight satellite transponders, different satellites, simultaneously. The system supports MPEG-2 or H.264 input and output. Forwarding of PIDs via IP is transparent and does not depend on the content of each individual elementary stream.

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 S-S2/IP/Sat selects all required PIDs and multiplexes the demultiplexed transport stream packets into IP packets.

The unit provides PID filtering of all unwanted traffic, increasing system performance and the number of channels which can be transmitted per unit.

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. In addition to push, programs can be forwarded on request (pulled) using RTSP, HTTP, HTTP Live, HTTP Smooth, RTMP, or HTTP Dynamic. Each individual converted program channel consists of all necessary elementary streams and clocking information to present a synchronized A/V signal.

We also offer a similar system with the capability of transcoding the streams into H.264 format – see our MPEG Gearbox™.

Features

- Encapsulates 200+ transport streams into IP packets
 - Simultaneously receives transport streams from up to eight satellite transponders
 - Each tuner can process all the streams within each of the tuned transponders, and unit can encapsulate 200+ streams at the same time
 - Supports MPEG-2 and H.264 input and output, in SD and HD format
 - Supports HTTP live adaptive streaming protocol for output to mobile devices
 - Capable of near real time FTP output of segmented TS streams with I-Frame boundaries
 - Supports M3u8 playlist files (standalone and through HTTP live)
 - PID filtering
 - DVB-S or DVB-S2 inputs
 - Supports DISEqC
 - IP Output – UDP, RTP, RTSP, HTTP, HTTP Live, HTTP Smooth, HTTP Dynamic, FTP, RTMP (Open Flash), WMV9 with HTTP/ASF
 - 200 Mbps IP raw output capability
 - Transmits PAT, PMT, and PCR information
 - Receives and transmits at the same time
 - Remote configuration management via Web Browser and Secure Shell (SSH)
 - Option for store and forward
 - Optional support for encrypted streams (CAM modules)
 - Supports NTSC or PAL
 - Based on embedded Linux®
 - For system with up to 60 Mbps IP transcoded H.264 output capability, see MPEG Gearbox™
- Note:** This system is typically deployed in "closed" systems where bandwidth is dedicated and is used for this purpose only. It is not guaranteed to work over the public internet. Performance depends on available bandwidth.

Applications

- IPTV Unicasting, Multicasting, Streaming
- Telco TV
- Hotels, Cruise Lines, Universities, Resorts
- Streaming to designated VideoLAN VLC, Mplayer, or Windows Media Player clients, or to Amino™ or other set-top boxes

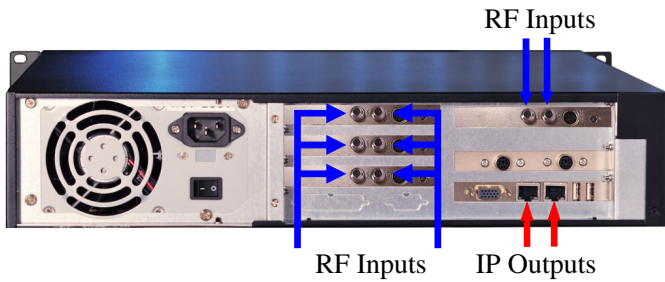


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IP Output

Output protocols:	UDP, RTP, RTSP, HTTP, HTTP Live, HTTP Smooth, HTTP Dynamic, FTP, RTMP (Open Flash), Windows® Media Video 9 with HTTP/ASF
H.264 bit rates:	64 Kbps to 50 Mbps
Ethernet:	Up to 2 x 1Gb
Type:	IP-multicast, IP-unicast, IGMP

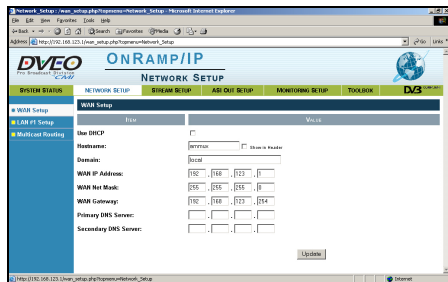
Inputs/Outputs



Sample GUI's



Status Screen



Network Setup

Ordering Information

- OnRamp S-S2/IP – 2 RU, 1 to 8 Receivers
- OnRamp S-S2/IP/S+F – 2 RU with store and forward option
- OnRamp S-S2/IP/ES – 2 RU with encrypted streams option
- TC Option – Transcoding from MPEG-2 to H.264 – see MPEG Gearbox

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Specifications

Supported Resolutions – Input and Output

1920 x 1080	720 x 480	480 x 480	qHD
1280 x 720	704 x 480	480 x 320	H.264up
720 x 576	640 x 480	320 x 240	

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

Note: Supports closed captions.

DVB-S/S2 Input

Modulation:	DVB-S, DVB-S2
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
Max. raw throughput:	200 mbps

Administration

Access:	Web interface, ssh interface
SNMP:	Monitoring and alerts

Physical & Power

Size:	19" rack mounted, 2 RU high
Voltage:	85-265 VAC/50-60Hz, 50 watts
Temperature:	0°C to 50°C
Humidity:	5% to 95% non-condensing
Conformities:	UL, CSA, CE, RoHS

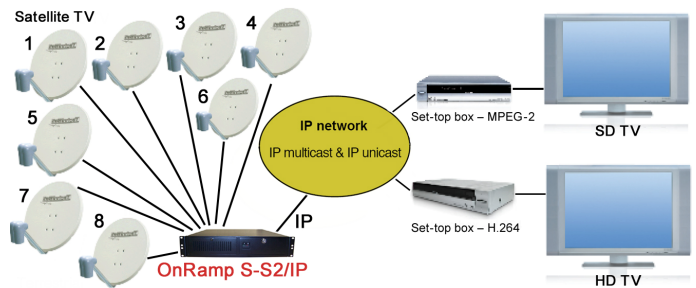
Store and Forward Option

500 Gig Drive:	Will store hundreds of incoming streams by any amount of time
Maximum Aggregate:	1,000 hours

Transcode Option – MPEG Gearbox

By utilizing an Intel Core i7 6 Core processor we can transcode up to:	15 SD Streams 4 to 6 720p HD streams 3 1080i HD streams 30 ½ D1 streams
H.264 throughput:	Up to 60 Mbps via Intel Core i7 6 Core

Block Diagram



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