

V-Ramp™ IP+DVB-S/S2+ASI/ SDI+HDMI+CVBS+IP

Multi Resolution, SD/HD, 4:2:0, H.264 and MPEG-2 Integrated Receiver Decoder with Multi-Channel Descrambling, Multiplexing, and External Table/Data Insertion. 2 DVB-S/S2 Inputs Plus IP (with Pro-MPEG FEC) and/or ASI Input. Output is Two Each SDI/HD-SDI, HDMI, or Composite. Supports Two-Channel Audio Decoding via CVBS, HDMI and HD-SDI Output. For Content Distribution, Real Time Signal Conversion and Transmission via IP. Optional Transcoding and/or Transmodulating.



Front



Rear



Features

- Inputs:
 - Two DVB-S/S2 inputs
 - IP
 - DVB-ASI
- Outputs – Two Each:
 - SDI/HD-SDI
 - HDMI
 - CVBS (Composite)
- Decrypts multi-channel programs by Conax, Irdeto, NDS, Viaccess, Verimatrix, BISS-1/BISS-E or other DVB-based condition access systems via dual independent CI slots
- Features program multiplexing, filtering, AD/EPG insertion and cherry picking
- Supports multicast and unicast broadcasting in LAN and WAN network
- SDI output with 2 embedded audios
- Up to two pairs of audio decoding
- Supports balanced/unbalanced analog audios, GPI and cue tone
- Embedded BISS-1 & BISS-E support TS & Program level descrambling
- Support TS bypass
- PID filtering, PCR re-mapping and stuffing (VBR/CBR)
- VBI subtitle insertion from analog video
- Configure via LCD Front Panel controls or web-based management interface
- Optional DVB-S2 multistream receiving
- Optional four channel MPEG-2 to/from H.264 transcoding (two channels for HD programs)
- Optional four channel Annex A/B QAM output or two channel OFDM output – ideal for transmodulation
- Optional dual ASI and IP outputs for redundancy and backup

Applications

- Off air satellite receiver
- MPEG-2/4/H.264 HD Decoder
- HD-SDI file playback
- Content repurposing

Overview

IRD's are devices used by professionals to receive or demodulate RF feeds and to then decode the resultant MPEG encoded stream.

The V-Ramp™ IP+DVB-S/S2+ASI/SDI+HDMI+CVBS +IP is a powerful and cost-effective broadcast quality decoder. It supports MPEG-2/H.264 SD/HD signal receiving through various inputs, and then decrypts and converts the processed programs/transport streams through a rich set of outputs including SD/HD-SDI, HDMI, and CVBS. Audio output is embedded AAC or MPEG-1 Layer II.

The system supports multi-channel descrambling, multiplexing, external table/data insertion, and optional transcoding or transmodulating. It also supports video decoding with two audio channels. With the web-based management interfaces, it is ideal for advanced content distribution, real-time signal conversion and transmission via an all IP head-end system.



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Specifications

DVB-S/S2 Input

Input:	1xRF (F-type, single input), 75Ω 2xRF (F-type, dual input), 75Ω
Constellation:	QPSK, 8 PSK
Symbol Rate:	1~45 Msps
Input Frequency:	950~2150 MHz
Max bitrate:	150Mbps
Signal Level:	-65~-25 dBm
LNB PS:	DC 13/18V
22K Switch:	on/off

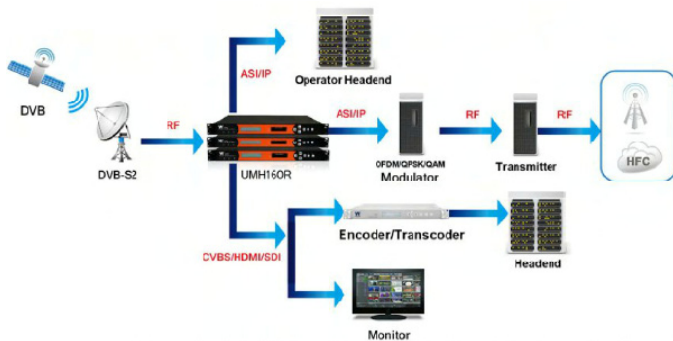
IP Input

Interface:	GbE level RJ45 Port
Speed:	Up to 1000 Mbps
MPEG TS :	MPTS and SPTS
TS Format:	188/204 Byte per packet
Package Format:	UDP & RTP (auto detection)
Traffic Type:	Unicast: (ARP) Multicast: (IGMPv1, v2, v3)
FEC:	Pro-MPEG CoP3v2
TCP/IP Protocol:	IPv4, IPv6

DVB-ASI Input

Interface:	4 BNC, 75Ω (2 x ASI input, 2 x ASI output)
Max Bitrate:	150 Mbps
Packet Type:	188/204 Bytes
Input Mode:	Spread and burst
Output Mode:	Supports burst
Transmission:	Supports MPEG-2/H.264 SD/HD stream bypass transmission Supports AC-3/E-AC-3 audio bypass transmission

Application Example



Video Decoding

Decoding Formats:	MPEG-2 SD 4:2:0 MP@ML MPEG-2 HD 4:2:0 MP@ML MPEG-4 AVC SD MP@L3 MPEG-4 AVC HD MP@L4.0/HP@4.0
Video Formats:	PAL, PAL-M/N, NTSC

Audio Decoding

Audio Format:	Musicam (MPEG-1 Layer 2) Dolby Digital (AC-3) (Optional) Dolby Digital Plus (E-AC-3) (Optional) AAC (MPEG-2, MPEG-4/HE v1,2 , MPEG-4/LC) (Optional)
Adjustable Volume Level:	-64~0dBm

Optional TS Transcoding

Processing channels:	4 channels
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Optional TS Transcoding Input

Video:	H.264 (MPEG-4 part 10) or MPEG-2
Video Resolution:	Any resolution (Maximum 1080p/60 Hz)
Aspect Ratio:	4:3, 16:9
Audio:	MPEG-1 Layer I/II MPEG-2 Layer II Dolby Digital (AC-3) – License required AAC – License required
Sampling Frequency:	32 KHz, 44.1 KHz , 48 KHz
Audio Modes:	Stereo, dual mono, Single Mon

Optional TS Transcoding Output

Video:	H.264 (MPEG-4 part 10) 4:2:0 MP@L4 MPEG-2 4:2:0 MP@ML
Resolution:	576i, 480i (BT.656) 1080i/50, 1080i/60, 1080i/59.94 720p/50, 720 p/60, 720p/59.94
Audio:	MPEG-1 Layer-I/II AAC
Bitrates:	MPEG-2 video: 2.0~15 Mbps (CBR & VBR) Audio: 64~384 Kbps H.264 Video: 1.0~20 Mbps (CBR & VBR) Audio: 32~384 Kbps
Adjustable Volume:	-63~0dBm

Physical and Power

Input Voltage	90 – 260 VAC
Power Consumption	Approximately 40 W
Rack Space	1 RU
Dimensions (WxHxD)	480mm x 44mm x 440mm
Operating Temp.	0o to 50oC
Storage Temp.	-40° to 65°C
Relative Operating Humidity	<95%

Ordering Info

V-Ramp IP+DVB-S/S2+ASI/SDI+HDMI+CVBS+IP
V-Ramp with Optional transcoding