SVP Broadcast Microwave

IRD-70

DVB-S2/S Demodulator & H.264 - 4:2:2 - 10 bits Decoder

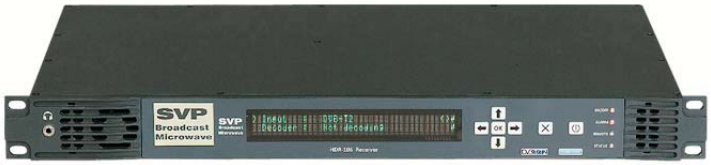
The IRD-70 is the new complete IRD developed by SVP Broadcast Microwave. It demodulates DVB-S2 and DVB-S input signals. DVB-S2 modulation outperforms DVB-S modulation and offers much higher data rate and, therefore, higher quality signal or much more robust signal than DVB-S, making possible longer and more difficult links.

It decodes input TS (H.264 and MPEG-2) signals of up to 45 Mbaud/s with a superior quality and the lowest delay. The IRD-70 is an H.264 decoder, which can work with HD and SD input signals. Moreover, it works in 4:2:2 with 10 bits.

The new IRD-70 features BISS and AES decryption (optional) for added security.

This new IRD generation has several video outputs: 3G/HD/SD-SDI, HDMI, Transport Stream over IP and analogue. The IRD-70 offers simultaneously the received signal in all these outputs. Regarding audio, SDI embedded, HDMI embedded, analogue and AES audio outputs are available as standard. User data, GPS data and metadata can be received over the data channel.

The IRD-70 has available ASI and Transport Stream over IP and FEC decoding as defined in SMPTE 2022.



H.264 4:2:2 10 bits

DVB S/S2

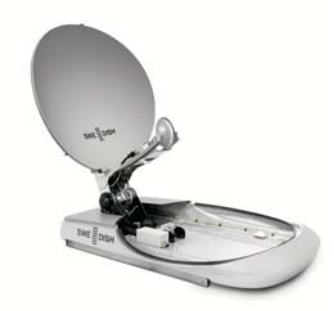
FEATURES

- DVB-S2 and DVB-S compliant
- Superior decoding quality and performance (NEL - NTT technology)
- H.264 and MPEG-2 HD/SD 4:2:2/4:2:0 decoder
- Lowest Delay in H.264: 33ms
- Output video signals: 3G/HD/SD-SDI, CVBS, HDMI
- Highest video quality available: 1080p/50/60, 3G-SDI
- ASI and Transport Stream over IP with FEC input and output
- 4 x L Band inputs
- BISS-1 and BISS-E encryption
- AES-128 and AES-256 encryption (optional)

APPLICATIONS

- SNG
- ENG/OB
- High-performance decoder

APPLICATIONS



Satellite News Gathering (SNG)

Characteristics

IF Stage — DVB-S2 and DVB-S

Tuning range:	950 to 2.150 MHz (L band)
Input level range:	-30 to -60 dBm
LNB supply:	13V/14V/18V/19V -> 500mA
Input connector:	4 x F female

Demodulation

DVB-S2	QPSK, 8PSK, 16APSK, 32APSK LDPC FEC: 1/4, 1/3, 2/5, 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10 Baud Rate: 2 to 45 Mbaud/s Input Return Loss: > 9dB Input Connector: N female (BNC optional) LNB supply: 13V/ 14V/ 18V/ 19V -> 500mA
DVB-S	QPSK Reed Solomon FEC: 1/2, 2/3, 3/4, 5/6, 7/8

Decoder

H.264:	Profiles: Baseline, Main, High High 422 (Support 10 bits) Level: 4.1 - 4.2 Latency: 33 ms
MPEG-2:	Profiles: 422P@HL, MP@HL, 422P@ML MP@ML
Audio decoder:	MPEG-1 Layer I/II
Max. input bitrate:	320 Mbps
Genlock input:	Black burst or tri-level, Genlock loop

Decryption

BISS:	BISS-1 and BISS-E
AES:	AES-128 and AES-256 (optional)

Video

Outputs:	3G-SDI HD-SDI SD-SDI HDMI (1.4) CVBS
Formats:	**1080p** (1920x1080) - 23.98/ 24/ 25/ 29.97/ 30/ 50/ 59.94/ 60 Hz **1080i** (1920x1080) - 50/ 59.94/ 60 Hz **720p** (1280x720) - 23.98/ 24/ 25/ 29.97/ 30/ 50/ 59,94/ 60 Hz **576i** (720x576) - 50 Hz **480i** (720x480) - 59.94 Hz

Audio

Output :	HDMI / SDI embedded/ AES Digital / Analogue
Analogue:	2 Stereo/ 4 Mono
SDI embedded:	1 group (4 audio channels)
AES/EBU:	2 stereo channels

Data Channel

Data channel:	User data or GPS
Data rate:	1.200 to 57.600 bps

ASI and IP

Outputs and Inputs:	ASI transport Stream (EN50083-9) Transport Stream over IP (SMPTE2022/CoP3) - FEC Max. TS packets / IP packet: 7

Control and Monitorization

Control Interfaces:	Front panel & display Web Server interface SNMP RTC-01 via cable
Monitoring:	Decoder parameters Demodulation parameters Frequency and input level MER, BER, C/N Alarms, warnings, logbook and clock
Video & Audio:	TFT Video screen 2" 2 x Stereo loudspeakers Earphone output

Power Supply

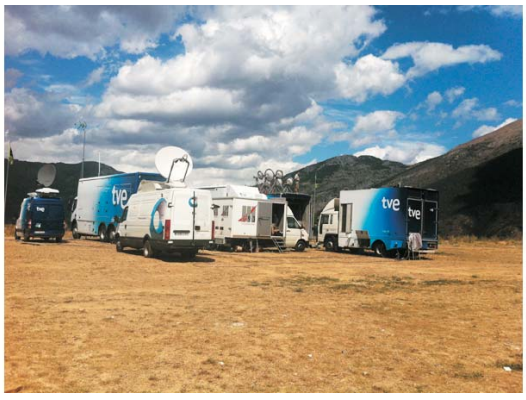
AC input:	100 to 240 V
DC input:	11 to 36 V

Mechanical

Size:	1 RU, 255 mm (10 in) depth
Weight:	3 kg (6.6 lb)

Environmental

Temperature range:	-10 to 45ºC
Height:	4.500 m
Humidity:	95%



H.264 4:2:2 10 bits DVB S/S2 NEL NTT Electronics Codec Inside