

DVB-S/S2 MULTISTREAM RECEIVER - DESCRAMBLER

The high quality, professional and cost-effective solution



The “RXS 1000” is a DVB-S/S2 Multistream Receiver: a high quality, professional, flexible and really cost-effective solution to demodulate a DVB-S/S2 signal.

Applications

- Satellite Receiver/Demodulator for Contribution and Distribution
- Digital Microwave Link Receiver/Demodulator

Main Features

- Compliant to **DVB-S** standard ETSI EN 300 421
- Compliant to **DVB-S2** standard ETSI EN 302 307 for **Broadcast** and **DSNG** applications
- Supports all modulation schemes (QPSK, 8PSK, 16APSK and 32APSK)

- Up to 6 different ASI Transport Stream outputs
- Option for ASI output monitoring switcher (usable for n+1 configurations)
- Option for Ethernet output (TS over IP – Unicast/Multicast, UDP/RTP with FEC encoding)
- Supports **Multistream** mode with the capability to filter two streams per receiver
- Up to 4 CAM Slots for Transport Stream decryption
- PL (Physical Layer) de-scrambler with 2 Gold Codes automatic switching
- Option for BISS 1/E decryption
- Symbol Rate up to 45MS/s (38MS/s for 32APSK modulation scheme)
- Wide dynamic IF “L” Band input level range (-10 to -80dBm)
- Adaptive equalization
- User Friendly **local and remote control** includes “on-board” display, WEB server, SNMP and e-mail client
- Option for Double (redundant) Power Supply
- Stand-Alone Unit 19” 1U high

DVB-S/S2 Multistream Receiver Board

RECEIVER SPECIFICATIONS

Inputs:	Single or double input tuner (according to hardware options) Tuners can be connected as follows: <ul style="list-style-type: none"> • Single tuner with "L" Band input and output connectors (loop through) (*) • Double tuner with "L" Band input and output connectors (loop through) • Double tuner with two separate "L" Band input connectors <i>(*) - This is the standard configuration normally available; other configurations on request and subject to minimum ordering quantity.</i>
Modulation schemes and reference standards:	QPSK, 8PSK, 16APSK, 32APSK (EN300 421, EN 302 307 DVB-S/S2 Broadcast and DSNG) (when double demodulation is active, only QPSK and 8PSK schemes are supported)
IF ("L" Band) input frequency:	950 to 2,150MHz
IF ("L" Band) input level:	-10 to -80dBm
Input impedance and connector:	75 Ω "F" socket (option: SMA)
Symbol Rate:	1 to 45MS/s (38MS/s for 32APSK modulation scheme)
Multistream (MIS) filtering:	Supported with ISI value selection
LNB Power Supply and Control:	0V (off) or 13V (vertical polarization) or 18V (horizontal polarization) – 350mA max. 22KHz tone (on/off for High /Low band control)
Baseband Shaping (roll-off):	20% - 25% - 35% according to the standard
Maximum output bit rate:	Over 100Mbit/s

Decryption Options

CAM SLOT MODULES (Option)

Reference Standard:	EN50221
Interface:	PCMCIA DVB-CI Common Interface
CAS Support:	Professional Multiprogram CAM (up to 24 Elementary Stream descrambling)
PL (Physical Layer) de-scrambler	
PL de-scrambler:	Supported with 2 Gold Code setting and automatic switching
BISS 1/E (option)	
BISS 1/E decryption:	Supported

Output interface

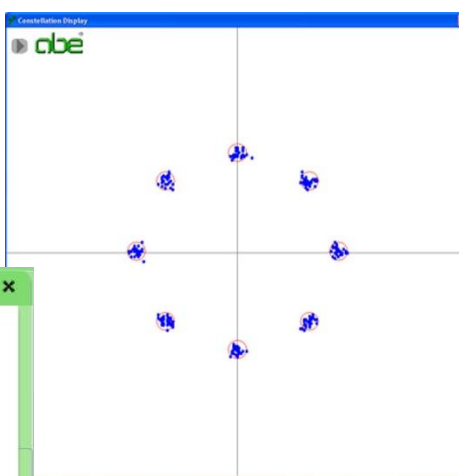
ASI

Reference Standard:	ASI-C MPEG ISO / IEC 13818-1
Output impedance and connector:	75 Ω "BNC" socket
Ethernet (TS Over IP) - option	
Reference Standard:	Pro-MPEG Code of Practice #3 release 2 (Unicast/Multicast, UDP/RTP with FEC encoding)
Output connector:	RJ45

General Specifications

Power supply:	85 to 264Vac 50/60 Hz Options: Double (redundant) power supply; D.C. power supply (36 to 72V input)
Remote control interface:	Ethernet 10/100 Base-T (SNMP, web server, e-mail client) option: RS485 and RS232 on Multistream Receiver board
Housing:	Rack drawer 19" 1U
Operating temperature range:	0 to 45° C.

A screenshot of the Constellation Diagram from the Multistream Receiver board control software connected through RS232 interface



DVB-S/S2 MULTISTREAM - RECEIVER 1 SETTINGS STATUS

Received IF Level (dBm):	-53dBm	General Status :	FULL LOCKED
Detected DVB Standard :	DVB-S2	Spectrum:	Inverted
Detected Constellation:	8 PSK	Pilots:	No Pilots
Detected BER / PER:	<1 E-7	Frequency Offset (KHz):	1663
Detected Code Rate:	5/6	Frame Length:	Normal
C/N - MER (dB):	12.5 dB	Link Margin (dB):	3.2
Symbol Rate (KS/s):	36512.88	Eb/No:	8.6
Output 1 Bitrate (Mb/s):	22.385132	Output 2 Bitrate (Mb/s):	22.376954
<input checked="" type="checkbox"/> FEC Locked <input checked="" type="checkbox"/> Carrier Detected <input checked="" type="checkbox"/> TS FIFO OK			

MATYPE

Roll Off:	0.35	CCM / ACM or VCM:	CCM
Null Packet deletion:	No Active	SIS / MIS :	Multiple
ISSYII :	Not active	Stream type:	Transport

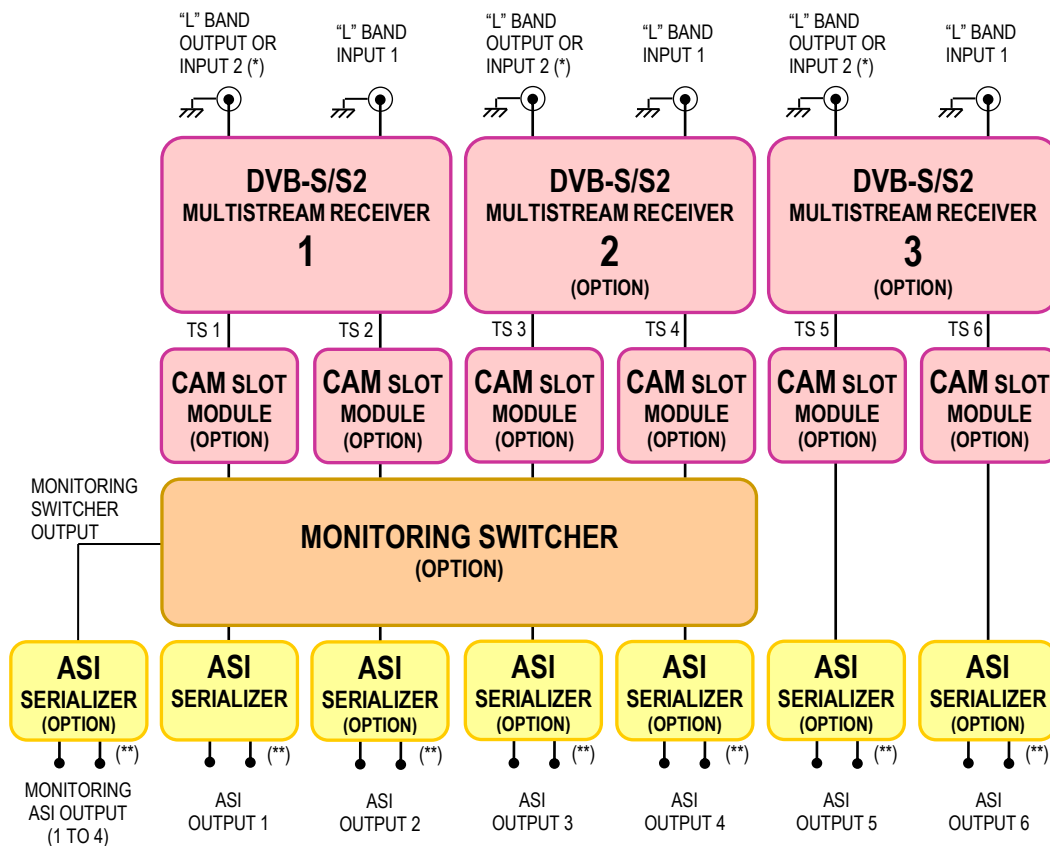
MULTISTREAM - RECEIVER 1 SETTINGS STATUS

LNB L.O. Freq. (MHz):	10600	LNB Type:	Universal
Rx Frequency (MHz):	12719	Symbol Rate (KS/s):	36513
22 KHz Tone:	On	Polarization:	Horizontal(18 V)
ISI Filter 1:	On	Select ISI 1 Stream:	33
ISI Filter 2:	On	Select ISI 2 Stream:	34
PL De-Scrambling:	Broadcast mode	Gold Code 1:	0
		Gold Code 2(Alternative):	0

Apply

Screenshots of the Multi-stream Receiver Web GUI

RXS 1000 Series DVB-S/S2 Multistream Receiver-Descrambler general block diagram



HARDWARE CONFIGURATION LIMITATIONS:

- Maximum number of ASI (BNC) outputs: 8
- Maximum number of DVBS-S2 receivers: 3
- Maximum number of CAM SLOT Modules: 4
- Maximum total number of Receivers+CAM Slots: 6

(*) – ACCORDING TO BOARD HARDWARE CONFIGURATION

(**) – Optional 2nd ASI (replicated) output

Main available options:

- Up to 3 DVB-S/S2 Multistream Receivers
- Up to 6 ASI Transport Stream outputs
- Up to 4 CAM Slot modules
- BISS 1/E descrambler
- ASI output monitoring switcher (usable for n+1 configurations)
- Ethernet output (for TS over IP – Unicast/Multicast, UDP/RTP with FEC encoding)