



RX1290 Multi-Format Receiver

Television is changing and the move to MPEG-4 is gathering pace. The driving factor to migrate to MPEG-4 is often the need to provide High Definition video. As this transition takes place there is a strong demand for a multi-standard receiver – a highly flexible unit that can decode both MPEG-2 and MPEG-4 broadcasts. It is this shift in the world of broadcasting that the RX1290 receiver addresses perfectly.

The TANDBERG Television RX1290 multi-format, multi-standard receiver is a high quality professional receiver capable of meeting the fast-changing needs of the broadcast industry. The capability for both MPEG-2 and MPEG-4 decoding in HD and SD formats makes it the perfect choice for Contribution, Distribution and Mobile applications.

PRODUCT OVERVIEW

Reduced Bandwidth

The RX1290, in combination with EN5990 encoders utilizing H.264 compression enables significant bandwidth reduction. For satellite transmission the inclusion of the DVB-S2 demodulator option allows further bandwidth reductions – often achieving an additional 30% reduction.

Flexibility and Future Proofing

The RX1290 is capable of decoding all major video formats in use today in both SD and HD resolutions making the receiver highly flexible and a cost effective choice for those looking to upgrade from MPEG-2 to H.264 encoding technology.

Low Cost of Operation

The RX1290 can be integrated into a TANDBERG Television Director V5 control system enabling large populations of receivers to be remotely controlled over-air from a central location, simplifying the system control structure and reducing the need for costly on-site local operators.

Connectivity

The RX1290 provides a high level of connectivity allowing the unit to be integrated into a wide range of system architectures. With an ASI input as standard and a choice of input cards the RX1290 can integrate into IP and RF delivery systems. The receiver provides a multitude of output connections allowing high quality delivery of audio and video into the onward network.

BASE UNIT FEATURES

RX1290 – Multi-Format Receiver (RX1290/BAS)

The following features are available as standard:

- MPEG-2, SD 4:2:0 decoding.
- MPEG-2, SD, 4:2:2 decoding.
- MPEG-2, HD, 4:2:0 decoding.
- 3 x HD SDI, SD SDI or ASI outputs.
- 1 x RGB or YPrPb analog video output.
- 1 x ASI input.
- 2 x 9 balanced analog audio outputs.
- 2 x Balanced digital audio outputs.
- 4 x Unbalanced digital audio outputs.
- Frame synchronization input.
- RS-232 data output.
- RS232/485 Control port.
- Alarm relay.

OPTIONS

Input Options

The RX1290 has a single ASI input as standard and can in addition be configured with a high performance DVB S2 demodulator.

DVB-S2 Input (4x L-band inputs)	(RX1290/HWO/DVBS2)
DVB-S2 Input (3x L-band inputs, IF input, I/Q Constellation out)	(RX1290/HWO/DVBS2/IF/CONST)
10/100 BaseT Input	(RX1290/HWO/IP/PROFEC)
DVB-S2 QPSK License	(RX1290/SWO/DVBS2/QPSK)
DVB-S2 8PSK License	(RX1290/SWO/DVBS2/8PSK)
DVB-S2 Low Symbol Rate License	(RX1290/SWO/DVBS2/LSYM)
Pro-MPEG FEC License	(RX1290/SWO/IP/PROMPEG)

Decoding Options

The RX1290 is designed to support a range of video decoding standards.

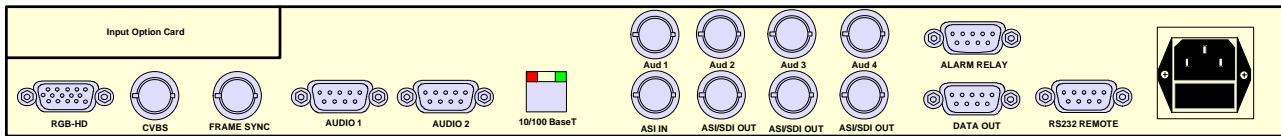
H.264 SD Decoding	(RX1290/SWO/MPEG4/SD)
H.264 HD Decoding	(RX1290/SWO/MPEG4/HD)
MPEG-2 4:2:2 HD Decoding	(RX1290/SWO/MPEG2/HD/422)

Conditional Access

The RX1290 supports the TANDBERG Director v5 Contribution & Distribution system allowing secure transmission through a secure CA system and over-air control and over-air software download to individual receivers.

TANDBERG Director V5	(RX1290/SWO/DIR5)
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SAMPLE CONFIGURATION



SPECIFICATIONS

Video and Audio Formats

H.264 (HD)*

Profiles:	MP@L4, HP@L4
Max video rate:	20 Mbit/s
Video format:	1080i at 29.97, 30 & 25 fps 720p at 59.94, 60 & 50 fps

H.264 (SD)*

Profiles:	MP@L3
Max video rate:	5 Mbit/s
Video format:	480i and 576i 29.97, 25 fps

MPEG-2 (HD)*

Profiles:	MP@HL, 422@HL*
Max video rate:	50 Mbit/s (MP@HL) 90 Mbit/s (422@HL)
Video format:	1080i at 29.97, 30 & 25 fps 720p at 59.94, 60 & 50 fps

MPEG-2 (SD)

Profiles:	MP@ML, 422@ML
Max video rate:	15 Mbit/s (MP@ML) 50 Mbit/s (422@ML)
Video format:	480i and 576i 29.97, 25 fps

Audio Decoding

Audio format:	MPEG-1 Layer-II audio Dolby® AC-3 decode Dolby® AC-3 pass-through
Sampling rate:	48 kHz
No. stereo pairs:	2

Input Interfaces

Frame Synchronization

Connector:	1x BNC (F) 75 Ohm
Input signal:	Analog SD Hsync (black and burst)

DVB ASI-C

Connector:	1x BNC (F) 75
Max input rate:	Ohm 160 Mbit/s
Packet length:	188/204 byte packets
Standard:	EN50083-9

MPEG over IP (option)

Connector:	1x RJ 45
Format:	10/100 BaseT
FEC:	Pro-MPEG

DVB-S2 (Option)

Connector:	4x F-Type (F), 75 Ohm
Modulation:	DVB-S, QPSK, DVB-S2, QPSK and 8PSK*

Frequency range:	950 – 2150 MHz
Input Level:	-25 dBm to -65 dBm
Symbol Rate:	1 - 45 Msymbol/s (DVB-S) 1* - 31 Msymbol/s (DVB-S2)
Bit-Rate:	81 Mbit/s Max (DVB-S2)
FEC, DVB-S:	1/2, 2/3, 3/4, 5/6, 7/8
FEC, DVB-S QPSK:	1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10
FEC, DVB-S2 8PSK:	3/5, 2/3, 3/4, 5/6, 8/9, 9/10
DVB-S2 FEC Frame:	Normal Frames
LNB Power:	13V, 18V or off, 22 kHz on/off
Standard:	EN300 421, EN302 307

DVBS2/IF/CONST (Option)

L-Band Inputs:	3x F-Type (F), 75 Ohm
IF Monitor Input:	1x IF BNC (F) 75 Ohm
IF Input Freq Range:	50 – 180MHz (monitor input)
IF Input Level:	-15 dBm to -40 dBm
Constellation Output:	2x BNC I/Q (F) down-sampled

*License key dependent

Outputs

SDI/HD-SDI/DVB ASI-C (Switchable)

Connector:	3 x BNC 75 ohms
HD-SDI standard:	SMPTE 292M
SD-SDI standard:	SMPTE 259M
Embedded Audio:	SMPTE 299M (HD) SMPTE 272M (SD)
Embedded Audio ch:	4 stereo pairs
ASI standard:	EN50083-9

Video RGB-HD (SVGA)

Connector:	1x15 pin D-type
Format:	RGB H&V/YPrPb (switchable)

CVBS

Connector:	1 x BNC 75 ohms
Format:	PAL / NTSC

Audio

Connector:	2x 9 pin D-type
Analog audio:	2 stereo pairs Digital audio: 2x balanced stereo pairs 4x unbalanced stereo pairs - BNC (F) 75 Ohm

Data

Connector:	RS-232
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Features

Program selection for ATSC, DVB and MPEG-only streams
Input transport rate up to 160 Mbit/s (Nominal)
1 alarm relay

Conditional Access Options

TANDBERG Director V5

Control Options

Front panel keypad and LCD
SNMP
Web browser
TANDBERG Director V5 remote control

Physical and Power

Dimensions

(W x D x H) 440 x 400 x 44mm (17.2 x 10.75 x 1.75" approx)

Input Voltage

110/240VAC

Cooling

Integrated fan

Environmental Conditions

Operating Temperature

0°C to +50°C (32° to 122°F)

Storage Temperature

-20°C to +60°C (4° to 140°F)

Relative Humidity

5 to 95%

Compliance

CE marked in accordance with EU Low Voltage and EMC Directives
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EMC Compliance

EN55022, EN55024, AS/NZS3548, EN61000-3-2 and

TANDBERG television

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Americas
Asia
Australasia

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