MediaKind RX8330

The RX8330 shows its true class through its capability for multi-format decoding of all SD 4:2:0 video standards combined with high quality SDI digital video and analog video outputs. This capability is further enhanced by the RX8330's ability to receive, and down-convert HD video to SD providing an SD output for broadcast or monitoring.
For systems that stay in the compressed domain, decrypted transport streams can be handed off into digital networks through a choice of both ASI or optional IP output interfaces.

The MediaKind RX8330 Distribution Receiver provides feature-rich multi-format standard definition decoding capability with high quality SDI output for video distribution applications. The RX8330 gives the user access to technologies to allow for the most cost-effective and bandwidth transmissions possible while ensuring the highest standards of reliability and video quality.

The RX8330 offers both ASI and DVB-S2 capable satellite input interfaces. As security of content is always of paramount importance, compatibility with popular CA systems including DVB Common Interface is provided.

Product Overview

The Perfect Choice for a Large Network

The RX8330 is the perfect receive device for distribution of video services throughout a large network. The RX8330 provides the most up-to-date feature-set, combining maximum transmission efficiency with easy remote management of the receiver population.

Descrambling for Content Turn-Around

The RX8330 provides the capability to descramble single or multiple services to feed content turn-around systems enabling cost-conscious, efficient transcode systems.

Broadcast Efficiency

The RX8330 in combination with MediaKind's MPEG-4 AVP encoders leads to a highly efficient video distribution system. Combined with the additional 30 percent increase in channel capacity of DVB-S2 the RX8330 allows operators to achieve three times the amount of content through a transponder.

Multi-format Decoding

The RX8330 decodes all major SD video formats in use today providing complete flexibility for daily operations. The versatility that the RX8330 decoder provides makes it a "safe choice" for companies that are beginning to transmit MPEG-4 AVC SD but also continue to work in MPEG-2 SD. With the RX8330 they can migrate at their own pace.

Simplified Control and Lower Cost of Operations

Organizations with large populations of RX8330 receivers and other MediaKind receivers can simplify control by integrating with Director by MediaKind. Director provides remote, over-air, single-view control from a central location, reducing the need for on-site local operators.

Base Unit Features

RX8330 – Distribution Receiver

Chassis: (RX8330/BAS/A)

Base Value Pack (RX83XX/SWO/VP/BASE)

The following features enable the RX8330 for Single Service descrambling applications:

- Four input DVB-S and DVB-S2 input satellite demodulator
- ASI transport stream input and output
- Single service descrambling for DVB Common Interface CA, BISS and MediaKind Director CA systems
- Director Over-air control and software download
- MPEG-2 SD decode for monitoring
- SD Composite and SDI interfaces

- Front panel and Web browser control, with alarm relay
- SCTE 35 controlled contact closures for ad-insertion signaling

RX8330 – Russian SECAM Receiver (RX8330/BAS/RSECAM/A)

In addition to capability shown above the RX8330/BAS/RS/B provides:

- Russian SECAM composite output

RX8330 – IP Output Receiver (RX8330/BAS/IPOUT/A)

In addition to capability shown above the RX8330/BAS/IP/B provides:

- IP transport stream output interfaces

Additional capabilities offered:

- DVB-S2 Higher Order Modulations
- Full SD multi-format decode with SDI output
- HD to SD Down-conversion
- Multi-service decryption
- Two stereo pair AAC and Dolby® Digital audio decoding with 5.1 to 2.0 down-mixing
- MPE IP data de-encapsulation
- Single service filtering and PID remapping
- Multi-service filtering and stream splitting

Value Packs

The RX8330 provides Value Packs to bolster the core capability with useful functionality. By topping-up RX8330 capability, the unit can be deployed into additional applications.

SD Decode Value Pack (RX83XX/SWO/VP/SD)

- Enables RX8330 for SD decoding capability
- Multi-format MPEG-2 and MPEG-4 4:2:0 SD decoding
- Enables high-quality SDI video output
- Enables Dolby Digital and AAC audio decode
- Enables single service filtering

HD Decode and Down-Conversion Value Pack (RX83XX/SWO/VP/HD)

In *addition* to the capability provided by the SD Decode Value Pack the HD Decode and Down-Conversion Value Pack also enables:

- Multi-format MPEG-2 and MPEG-4 4:2:0 HD decoding and down-conversion to SD for output on SD-SDI and composite output

Multi-Service Descrambling Value Pack (RX83XX/SWO/VP/MSD)

RX8330 Basic or Decode Value Pack capability can be complemented by adding the Multi-Service Descrambling Value Pack. This functionality provides:

- Multi-service descrambling capability for Common Interface, BISS and Director CA systems
- Multi-Service filtering and stream splitting

DVB-S2 Higher Order Modulation Value Pack (RX83XX/SWO/VP/HOM)

The DVB-S2 demodulation capability in RX8330 can be further Increased by adding the DVB-S2 Higher Order Modulation Value Pack. This Value Pack adds:

- DVB-S2 16APSK and 32APSK higher order modulation

IP Output Value Pack (RX83XX/SWO/VP/IP)

Enables the IP outputs on the RX8330/BAS/IPOUT/A base unit. Provides IP TS output, MPE high speed data de-encapsulation.

Specifications

Video and Audio Options

MPEG-2 SD Decode	Profiles: MP@ML Max video rate: 15 Mbps (MP@ML) Video format: 480i and 576i 29.97, 25 fps
MPEG-2 HD with Down-conversion	Profiles: MP@HL Max. video rate: 80 Mbps (MP@HL) Video format: 1080i at 29.97 and 25 fps 720p at 59.94 and 50 fps High definition video down-converted and presented as SD only SD video format: 480i @ 29.97 or 576i @ 25, 50fps
MPEG-4 AVC SD Decode	Profiles: MP@L3 Max. video rate: 12 Mbps Video format: 480i and 576i 29.97, 25 fps
MPEG-4 AVC HD with Down-conversion	Profiles: MP@L4, HP@L4 Max. video rate: 20 Mbps Video format: 1080i @ 29.97 and 25 fps 720p @ 59.94 and 50 fps High definition video down-converted and presented as SD only SD video format: 480i @ 29.97fps or 576i @ 25, 50fps
Video Processing	Down-conversion (HD to SD) Aspect ratio conversion (16:9 to 4:3): none, center cut out, letter box, anamorphic - manual/AFD controlled
VBI	Closed captions, DVB Subtitle burn-in WST, Inverted Teletext, EBU Teletext subtitles and non subtitles, WSS, VITC, VITC in PES, VPS, VITS, NABTS, AMOL 48, AMOL 96, TV Guide, Video index, AFD pass-through

Audio Decoding

Audio Decoding	MPEG-1 Layer-II audio
	Dolby® Digital 2.0 decoding
	Dolby Digital 5.1 down-mix to 2.0
	AAC 2.0 decoding
	AAC 5.1 down-mix to 2.0
	Decoded audio embedded in SDI
	Sampling rate: 48 kHz
	No. stereo pairs: two

Features

Features	Program selection for ATSC, DVB and MPEG-only streams
	Input transport rate up to 160 Mbps (Nominal)
	One alarm relay
	Two SCTE 35 controlled contact closures for add-insertion signalling

Input Interfaces

Transport Stream Input	Format: DVB ASI
	Connector: 1x BNC 75 Ohm
	Max input rate: 160 Mbps
	Packet length: 188/204 byte packets
	Standard: EN50083-9
Satellite Input	Connector: 4x F-Type, 75 Ohm
	Modulation: DVB-S QPSK, DVB-S2 QPSK, 8PSK, 16APSK, DVB-S2 Multi TS
	Frequency range: 950 MHz to 2150 MHz
	Input Level: -25 dBm to -65 dBm
	Symbol Rate: 1 Msym/s to 45 Msym/s (DVB-S), 1Msym/s to 60 Msym/s [Inputs 1&2] 31MSym/s [Inputs 2&3] (DVB-S2)
	Bit-rate: 81 (170) Mbps max. (DVB-S2)
	FEC, DVB-S: 1/2, 2/3, 3/4, 5/6, 7/8
	FEC, DVB-S2 QPSK: 1/4, 1/3, 2/5, 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
	FEC, DVB-S2 16APSK: 2/3, 3/4, 4/5, 5/6, 8/9, 9/10
	DVB-S2 FEC Frame: Short Frames, Normal Frames
	LNB Power: 13V, 18V or off, 22 kHz on/off
	Standard: EN300 421, EN302 307

Outputs

SDI/DVB ASI-C (Individually Switchable)	Connector: 2x BNC 75 Ohm SDI Standard: SMPTE 259M Embedded Audio: SMPTE 272M ASI standard: EN50083-9
CVBS	Connector: 2x BNC 75 ohms Format: NTSC, PAL, Russian SECAM
Audio	Connector: 2x 9-pin D-type Analog audio: two balanced stereo pairs Digital audio: two balanced stereo pairs Decoded audio gain adjustment

Conditional Access

Director by MediaKind	Single service Director decryption Multi-service decryption - up to 24 services
DVB Common Interface	Single service decryption Multi-service decryption - Single CAM, up to 10 services or 24 PIDs
BISS	BISS modes 1 and E Single service decryption Multi-service decryption - up to 24 services (single key)

Stream Processing

Single Service filtering	Filter multiple services to one outgoing service Remap PIDs for the filtered service Output: CBR on ASI and IP SPTS
Multi-Service filtering	Filter N incoming services to M outgoing services Number of services: 24 max as 1xMPTS Remap PIDs on a single service Output: CBR on ASI and IP MPTS Stream splitting - up to eight services as IP SPTS

Output Options

Transport Stream Output	Transport encapsulation into IP MPTS/IP/UDP/RTP SPTS/IP/UDP/RTP with single service filtering - CBR mode IP output VBR mode - Null packets dropped 2x Gigabit Ethernet outputs, 100/1000 auto-sensing
High Speed Data Output	MPE based data de-encapsulation Max. bit-rate: 100 Mbps

Control

Control	Front panel keypad and LCD
	Director remote control
Ethernet	Dual RJ45 10/100BaseT control interface
	Full SNMP control, Web browser interface

Physical and Power

Dimensions (W x D x H)	440 x 400 x 44mm (17.2 x 15.75 x 1.75" approx.)
Input Voltage	110 VAC / 240 VAC
Power Consumption	45 Watt max. (depending on options fitted)
Cooling	Integrated fans

Environmental Conditions

Operating Temperature	0°C to 50°C (32° to 122°F)
Storage Temperature	-20°C to 70°C (4° to 140°F)
Relative Humidity	5% to 95% (Non-condensing)

Compliance

Compliance	CE marked in accordance with EU Low Voltage and EMC Directives
EMC Compliance	EN55022, EN61000-3-2[10], EN61000-3-3[10], EN55024, CISPR22, FCC CFR47 Part 15B Class A
Safety Compliance	EN60950-1, IEC60950-1, UL60950-1