ERICSSON RX8330

Distribution Receiver

The Ericsson 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. 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.

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 Ericsson'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 Ericsson receivers can simplify control by integrating with Director by Ericsson. 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, FAZ 101 0108/52)

Base Value Pack (RX83XX/SWO/VP/BASE, FAZ 101 0108/55)

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 Ericsson 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, FAZ 101 0108/53)

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

- Russian SECAM composite output

RX8330 – IP Output Receiver (RX8330/BAS/IPOUT/A, FAZ 101 0108/54)

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, FAZ 101 0108/56)

- 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, FAZ 101 0108/57)

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 outputs

Multi-Service Descrambling Value Pack
(RX83XX/SWO/VP/MSD, FAZ 101 0108/58)

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, FAZ 101 0108/60)

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, FAZ 101 0108/59)

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

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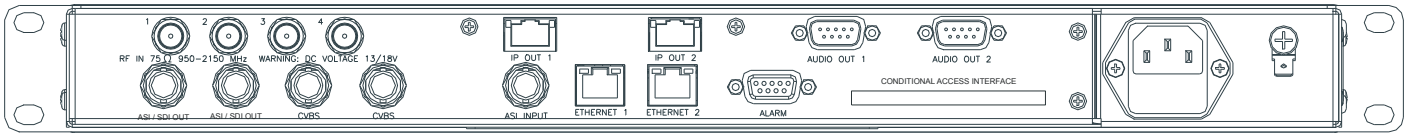
ERICSSON RX8330 DISTRIBUTION RECEIVER

SAMPLE CONFIGURATION



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

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

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 signaling

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 Ericsson

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^{y} 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

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

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

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