

MediaKind RX8200 Configuration Packs



The RX8200 Advanced Modular Receiver is the world's bestselling IRD. Now with DVB-S2X and HEVC capability makes it the most future-proof.

Broadcasters need to deploy receivers for many different tasks in many different operational circumstances. MediaKind's RX8200 receiver offers ultimate operational flexibility by providing capability for decoding of all video formats, all video compression formats and total connectivity for all transmission mediums via a comprehensive choice of options.

The RX8200 offers the ultimate in compression efficiency. RX8200 now provides HEVC decode capability. And for satellite operators RX8200 offers up to 20% bandwidth efficiency gains through full support of the new DVB-S2X international open standard. Combined, these two new technologies offer a step-change in transmission efficiency enabling Operators to dramatically reduce operational costs or free-up bandwidth to launch new revenue generating services.

Product Overview

Best Efficiency

The RX8200 Advanced Modular Receiver offers ultimate bandwidth efficiency for satellite transmissions by incorporating the option for the new DVB-S2 Extensions (DVB-S2X) standard. DVB-S2X offers up to 20% bit rate efficiency for typical video applications.

Multi-format Decoding - Including HEVC

As a true multi-format decoder, the RX8200 can offer MPEG-4 AVC 4:2:0 and 4:2:2 High Definition decoding in all industry-standard compression formats - Including HEVC. By using HEVC compression, combined with DVB-S2X (for satellite applications), Operators can benefit from a step-change in transmission efficiency

Content Security and Traceability

The RX8200 protects content to the fullest extent by combining secure, smart-card-less conditional access functionality with forensic watermarking capability to uniquely and imperceptibly mark decoded content - allowing any down-stream leaked content to be traced back to source.

Total Connectivity

The RX8200 Advanced Modular Receiver offers the user total connectivity through the capability to provide satellite, IP and ASI transport stream inputs, all within a single unit. With this flexibility the user is confident that their initial receiver investment is capable of adapting to a fast changing industry.

Highest Quality

The RX8200 Advanced Modular Receiver has the capability to provide the ultimate feature-set of MPEG-4 HD, 4:2:2 10-bit 1080p50/60 allowing broadcasters to achieve the highest possible video quality.

Lowest Latency

Broadcasters are increasingly demanding lowest latency for contribution and news applications. MediaKind offers the complete low latency suite of tools for the user - whether that be high quality MPEG-4 decoding or in the latest HEVC compression modes for optimal efficiency for satellite applications.

Why MediaKind

The MediaKind RX8200 Advanced Modular Receiver heads its class as an IRD offering the perfect balance of industry leading capability, flexibility and affordability.

Configuration Packs

The RX8200 Advanced Modular Receiver is available in Configuration Packs. Each Pack is specifically targeted at different applications and contains all relevant functionality for the intended purpose, from the *Basic Decoder* to the fully featured *The Works Decoder*.

BASIC Decoder

RX8200 Configuration Pack (RX8200/CP/BASIC/SAT/A) (RX8200/CP/BASIC/OFDM/A)

Entry level receiver capable of :

- Choice of satellite or OFDM Inputs
- MPEG-2 4:2:0 SD & HD decoding
- MPEG-4 4:2:0 SD & HD decoding

Base Chassis with:

- MPEG-2 4:2:0 SD & HD decoding
- MPEG-4 4:2:0 SD & HD decoding
- Frame Sync
- SD & HD video output interfaces
- 2x physical audio outputs
- Layer II, Dolby Digital & AAC audio decoding
- ASI output with single service filtering

Satellite Input Option

- 4x L-band satellite inputs
- DVB-S QPSK and DVB-S2 QPSK, 8PSK demodulation
- Low Symbol Rate Capability

OFDM Input Option

- VHF/UHF input
- 6MHz, 7MHz, 8MHz input bandwidth
- DVB-T and DVB-T2 demodulation

PREMIUM Decoder

RX8200 Configuration Pack (RX8200/CP/PREM/OFDM/B) (RX8200/CP/PREM/IP/SAT/A)

As Basic but adds:

- Grade 1 down-conversion
- Up conversion
- Cross conversion
- 4x physical audio out
- Phase Aligned Audio
- IP TS out
- SMPTE 2022M ProMPEG FEC out
- MPE high speed IP data output

OFDM & IP Input Option

- VHF/UHF input
- 6MHz, 7MHz, 8MHz input bandwidth
- DVB-T and DVB-T2 demodulation
- MPEG transport stream over IP
- 2x 100/1000 BaseT
- SMPTE 2022M ProMPEG FEC

Satellite & IP Input Option

- 4x L-band satellite inputs
- DVB-S QPSK and DVB-S2 QPSK, 8PSK demodulation
- DVB-S2 Low Symbol rate capability
- MPEG transport stream over IP
- 2x 100/1000 BaseT
- SMPTE 2022M ProMPEG FEC

DSNG Decoder

RX8200 Configuration Pack (RX8200/CP/DSNG/IP/SAT/B)

As Premium but adds:

- Dormant HEVC/MPEG-2/4 4:2:2 card, ready for future enabling by software upgrade
- Low latency decoding
- RAS CA
- RS232 control and data
- DVB-S2 16APSK

Satellite/IP Input Option

4x L-band satellite inputs

- DVB-S QPSK and DVB-S2 QPSK, 8PSK demodulation
- Adds DVB-S2 16APSK
- DVB-S2 Low Symbol rate capability
- MPEG transport stream over IP
- 2x 100/1000 BaseT
- SMPTE 2022M ProMPEG FEC

DSNG S2X HEVC Decoder

RX8200 Configuration Pack (RX8200/CP/DSNG/HEVC/B)

As DSNG but adds:

- DVB-S2/S2X input up to 16APSK
- HEVC 4:2:0 decoding

DVB-S2X Satellite/IP Input Option

- 4x L-band satellite inputs
- DVB-S QPSK and DVB-S2 QPSK, 8PSK demodulation
- Adds DVB-S2 16APSK
- DVB-S2 Low Symbol rate capability
- Adds DVB-S2X QPSK to 16APSK Capability
- MPEG transport stream over IP
- 2x 100/1000 BaseT
- SMPTE 2022M ProMPEG FEC

EVENTS Decoder

RX8200 Configuration Pack (RX8200/CP/EVENTS/IP/SAT/B)

As DSNG but adds:

- MPEG-2 4:2:2 SD/HD decoding
- MPEG-4 4:2:2 SD/HD decoding
- HEVC 4:2:0 & 4:2:2 Ready

Satellite/IP Input Option

- 4x L-band satellite inputs
- DVB-S QPSK and DVB-S2 QPSK, 8PSK, 16/32APSK demodulation
- DVB-S2 Low Symbol rate capability
- MPEG transport stream over IP
- 2x 100/1000 BaseT
- SMPTE 2022M ProMPEG FEC

EVENTS HEVC Decoder

RX8200 Configuration Pack (RX8200/CP/EVENTS/HEVC/B)

As Events but adds:

- DVB-S2X input up to 32APSK
- HEVC 4:2:0 decoding
- HEVC 4:2:2 decoding

DVB-S2X Satellite/IP Input Option

- 4x L-band satellite inputs
- DVB-S QPSK and DVB-S2 QPSK, 8PSK demodulation
- Adds DVB-S2 16/32APSK
- DVB-S2 Low Symbol rate capability
- Adds DVB-S2X QPSK to 32APSK Capability
- MPEG transport stream over IP
- 2x 100/1000 BaseT
- SMPTE 2022M ProMPEG FEC

THE WORKS Decoder

RX8200 Configuration Pack (RX8200/CP/WORKS/HEVC/B)

As EVENTS HEVC but adds:

- MPEG-4 1080p50/59.94 decoding
- Symulsync 3D/4k decoding
- Multi-service filtering
- SMPTE 2022-7 Seamless Switching

DVB-S2X Satellite/IP Input Option

- 4x L-band satellite inputs
- DVB-S QPSK and DVB-S2 QPSK, 8PSK demodulation
- Adds DVB-S2 16/32APSK
- DVB-S2 Low Symbol rate capability
- Adds DVB-S2X QPSK to 32APSK Capability
- MPEG transport stream over IP
- 2x 100/1000 BaseT
- SMPTE 2022M ProMPEG FEC

Configuration Packs Vs Value Pack Options

Marketing Code		
RX8200/CP/BASIC/SAT/A	1	
RX8200/CP/BASIC/OFDM/A	1	
RX8200/CP/PREM/IP/SAT/A	1	
RX8200/CP/PREM/OFDM/B	1	
RX8200/CP/DSNG/IP/SAT/B	1	
RX8200/CP/DSNG/HEVC/B	1	
RX8200/CP/EVENTS/IP/SAT/B	1	
RX8200/CP/EVENTS/HEVC/B	1	
RX8200/CP/WORKS/HEVC/B	1	
RX8200/BAS,B E10388_BOXED		BASE
RX8200/HWO/OFDM/B	1	HARDWARE OPTIONS
RX8200/HWO/S2X/B		
RX8200/HWO/S2/2/B	1	
RX8200/HWO/AUD/B	1	
RX8200/HWO/IP/I/O/B	1	
RX8200/HWO/HEVC/B	1	
RX8200/HWO/HQCONV/B	1	
RX8200/HWO/RS232/B	1	
RX8200/SWO/VP/BASE	1	SOFTWARE OPTIONS
RX8200/SWO/VP/S2/HOM	1	
RX8200/SWO/VP/S2X/HOM	1	
RX8200/SWO/VP/IP/IN	1	
RX8200/SWO/VP/IP/SEAMLESS	1	
RX8200/SWO/VP/MSD	1	
RX8200/SWO/VP/MP24/HD	1	
RX8200/SWO/VP/HEVC/HD	1	
RX8200/SWO/VP/CONT	1	
RX8200/SWO/VP/CONT/HEVC	1	
RX8200/SWO/VP/SSYNC	1	
RX8200/SWO/VP/EXAUD	1	
RX8200/SWO/VP/HQCONV	1	
2x Extra RX8XXX/CABLE/XLR		CABLES

Specifications

Input

ASI Transport Stream Input	<p>Connector: 1x BNC (F) 75 Ohm Max. input rate: 208 Mbps Packet length: 188/204 byte packets Standard: EN50083-9</p>
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Satellite Input Options

2nd Generation Satellite Input, Satellite & IP input	<p>Connector: 4x F-Type (F), 75 Ohm Frequency range: 950 MHz to 2150 MHz Input level: -25 dBm to -65 dBm Modulation: DVB-S QPSK, DVB-S2 QPSK, 8PSK Standard: EN300 421, EN302 307 DVB-S Symbol rate: 1 Msyms to 45 Msyms DVB-S2 Symbol rate: 1 Msyms to 60Msyms on inputs 1 & 2, Max bit rate 170Mbps, 31 Msyms, Max bit rate: 81Mbps on input 3 & 4 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 DVB-S2 FEC frame: Short & Normal frames DVB-S2 Physical layer scrambling LNB Power: 13V, 18V or off, 22 kHz on/off</p>
DVB-S2 HOM	<p>Modulation: DVB-S2 16APSK and 32APSK FEC, DVB-S2 16APSK: 2/3, 3/4, 4/5, 5/6, 8/9, 9/10 FEC, DVB-S2 32APSK: 3/4, 4/5, 5/6, 8/9, 9/10 Requires <i>2nd Generation Satellite</i> option</p>
DVB-S2X Satellite Input	<p>Connector: 4x F-Type (F), 75 Ohm Frequency range: 950 MHz to 2150 MHz Input level: -25 dBm to -65 dBm nominal (Symbol rate dependent) Modulation: DVB-S QPSK, DVB-S2 QPSK, 8PSK, 16APSK, DVB-S2X QPSK, 8PSK, 16APSK Standard: EN300 421, EN302 307-1, EN302 307-2 DVB-S Symbol rate: 1 Msyms to 45 Msyms DVB-S2 Symbol rate: 1 Msyms to 54Msyms Max bit rate 170Mbps DVB-S2X Symbol rate: 54Msyms DVB-S2 FEC frame: Short & Normal frames DVB-S2 Physical layer scrambling LNB Power: 13V, 18V or off, 22 kHz on/off</p>
DVB-S2X HOM	<p>Modulation: DVB-S2X 32APSK Requires <i>DVB-S2X Satellite Input</i> option</p>

IP Input

MPEG over Gigabit Ethernet IP Input	<p>Connector: 2 x RJ 45 Format: 100/1000BaseT Max. input rate: 208Mbps SMPTE 2022M-2 (Pro-MPEG) FEC SMPTE 2022M-7 (Seamless Switching)²</p>
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²Option dependent

G703 Input Options

MediaKind G.703	<p>Connector: BNC (F) Network: G.703 compliant PDH Input: E3 or DS-3 (selectable) Bit-rates: 34 Mbps or 45 Mbps versions</p>
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DVB-T/T2 Input Options

DVB-T/T2 Input	<p>Connector: 1x F-Type (F) 75 Ohm Channel bandwidth: 6, 7, 8MHz Frequency range: UHF 470 – 862 MHz, VHF 174 – 230 MHz Input MER level: 6 - 36dB</p>
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TS Options

TS Output	For ASI Out See HD & SD video out options
IP Output	<p>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 SMPTE 2022M (Pro-MPEG) FEC Multiple services filtered to 1 outgoing service on ASI and IP TS output Remap PIDs for the filtered service Output: CBR on ASI and IP SPTS MPE based data de-encapsulation MPE max. bit-rate: 100 Mbps</p>

Content Security

Director by MediaKind	<p>Director single service decryption Director over-air remote control NexGuard Network ID Forensic Watermarking</p>
DVB Common Interface	<p>Enables support for all major CAM modules Single service decryption Service pre-filtering</p>
BISS Decryption	Decryption of BISS Mode 1 and E
Multi-Service Decryption/Filtering	<p>Director multi-service decryption Decryption of up to 24 services Common Interface multi-service decryption Single CAM, up to 10 services or 24 PIDs BISS multi-service decryption Decryption of up to 24 services Filter N incoming services to M outgoing services Number of services: 24 max as 1x MPTS. Remap PIDs on a single service Output: CBR on ASI and IP MPTS Stream splitting - up to 8 services as IP SPTS</p>

Video Decoding Options

4:2:0 Decoding

MPEG-2 SD Decode	Profiles: MP@ML Max video rate: 15 Mbps (MP@ML) Video format: 480i and 576i 29.97, 25 fps
MPEG-4 AVC SD Decode	Profiles: MP@L3 - All units HP@L3.1—Needs MPEG-2 & 4 4:2:2 HW option Max. video rate: 12 Mbps - All units 17.5 Mbps - Needs 4:2:2 HW option Video format: 480i and 576i 29.97, 25 fps
HEVC SD Decode	HEVC Profiles: MAIN / MAIN10 Sampling: 8-bit and 10-bit Levels and max. video rate L3 - 6 Mbps, L3.1 - 10 Mbps L4 - 30 Mbps, L4.1 - 50 Mbps Video format: 480i and 576i 29.97, 25 fps
MPEG-2 HD Decode	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
MPEG-4 AVC HD Decode	Profiles: MP@L4, HP@L4 - All units HP@L4.1 - Needs MPEG-2 & 4 4:2:2 HW option Max. video rate: 25 Mbps - All units, 62.5Mbps - Needs 4:2:2 HW option Video format: 1080i at 29.97 and 25 fps, 720p at 59.94 and 50 fps
HEVC HD Decode	HEVC Profiles: MAIN / MAIN10 Sampling: 8-bit and 10-bit Levels and max. video rate L4 - 30 Mbps, L4.1 - 50 Mbps Video format: 1080i at 29.97 and 25 fps, 720p at 59.94 and 50 fps
VBI with 4:2:0 Decoding Modes	Closed captions, DVB Subtitle burn-in, SD resolution Teletext burn-in WST, Inverted Teletext, EBU Teletext subtitles and non-subtitles, WSS, VITC, VITC in PES, VPS, Video Index, VANC data-piping, Service name in VANC, monochrome samples, OP47 pass- through VITS, NABTS, AMOL48, AMOL96, TV Guide

4:2:2 Decoding

MPEG-2 SD 4:2:2	Profile: 422@ML Max. video rate: 50 Mbps Video format: 480i and 576i 29.97, 25 fps
MPEG-2 HD 4:2:2	Profiles: 422P@HL Max. video rate: 90 Mbps Video format: 1080i at 29.97, 30 and 25 fps, 720p at 59.94, 60 and 50 fps
MPEG-4 AVC SD 4:2:2	MPEG-4 Profile: 422HP@L3 Max. video rate: 50 Mbps Video format: 480i and 576i 29.97, 25 fps

HEVC SD 4:2:2	HEVC Profile: MAIN 4:2:2:10 Sampling: 8-bit and 10-bit Levels and max. video rate: L3 - 6 Mbps, L3.1 - 10 Mbps L4 - 30 Mbps, L4.1 - 50Mbps Video format: 480i and 576i 29.97, 25 fps
MPEG-4 AVC HD 4:2:2 Decode	MPEG-4 Profiles: HIGH / HIGH10 / HIGH422@L4.2 Sampling: 8-bit and 10-bit Max. video rate: 50 Mbps CABAC, 85 Mbps CAVLC Video format: 1080i at 29.97 and 25 fps 720p at 59.94 and 50 fps
HEVC HD 4:2:2 Decode	HEVC Profiles: MAIN 4:2:2 10@L4.2 Sampling: 8-bit and 10-bit Levels and max. video rate L4 - 30 Mbps, L4.1 - 50 Mbps Video format: 1080i at 29.97 and 25 fps 720p at 59.94 and 50 fps
MPEG-4 AVC HD 4:2:2 1080p 50/60 decode	Profiles: 422HP@L4.2 Max video rate: 85 Mbps CAVLC Video format: 1080p at 59.94 and 50fps
VBI with 4:2:2 decoding modes	Closed Captions, VITC, VBI in PIX

Audio Options

Balanced Audio Output	Connector: 2x 9-Pin D-type Analog audio: two balanced stereo pairs Digital audio: two balanced stereo pairs QTY 1 fitted as standard QTY 2 can be fitted for 4x stereo pair output - requires RX8200/SWO/4AUD)
Standard with any Video Decode Option:	2x MPEG-1 Layer-II audio decode 2x Dolby Digital® decode 2x Dolby Digital® Pass-through 2x Dolby® Digital Plus Pass-through 2x Dolby®E pass-through 2x Linear PCM decode Audio sampling rate: 48 kHz Decoded audio gain adjustment
Dolby® Digital	2x Dolby® Digital 5.1 decode and down-mix to 2.0 2x Dolby® Digital 2.0/5.1 pass-through compressed and embedded in (HD)SDI 1x Dolby® Digital 5.1 decode ²
Dolby® Digital Plus	2x Dolby® Digital Plus 2.0/5.1 pass-through compressed and embedded in (HD)SDI
AAC Audio	2x 5.1 down-mix to 2.0 2x 2.0 decode 1x 5.1 decode ²
Phase Aligned Audio	MPEG-1 Layer II audio or AAC audio 2x phase aligned groups of 4x stereo pairs, or 1x group of 8x stereo pairs Phase aligned to enable 5.1 carriage Requires Extra audio Value Pack 4x <i>Audio Capability</i> - see below

²Option dependent

4x Audio Capability	<p>Extends licensed audio decodes to more channels</p> <ul style="list-style-type: none"> 8x MPEG-1 Layer II audio decode 6x Dolby® Digital 2.0 decode, 5.1 to 2.0 down-mix 4x Dolby® Digital 2.0/5.1 pass-through - compressed and embedded in (HD)SDI 4x Dolby® Digital Plus 2.0/5/1 pass-through - compressed and embedded in (HD)SDI 1x Dolby® Digital 5.1 decode 8x AAC stereo pairs 4x Dolby®E pass-through 4x Linear PCM pass-through
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Video Processing

High Quality Format-Conversion Grade 1 quality down-conversion	<p>Simultaneous Down-conversion (HD to SD): center cut out, manual/AFD controlled</p> <p>Down-conversion from 1080p 50/60 to 1080i, 720p or SD</p>
Up-conversion	<p>Non-simultaneous up-conversion (SD to HD): To 720p or 1080i (4:2:0 modes only)</p>
Cross-conversion	<p>Non-simultaneous cross-conversion 720p to 1080i or 1080 to 720p</p> <p>No frame rate conversion</p>
Aspect Ratio Conversion	<p>16:9 to 4:3 center cut ARC in SD modes</p>
Frame Synchronization	<p>Enables Frame Sync</p> <p>Connector: 1x BNC (F) 75 Ohm</p> <p>Input signal: Analog SD HSync (black & burst)</p>

Video Output

HD and SD Video Output Composite Video	<p>Connector: 1x BNC (F) 75 Ohm</p> <p>Format: PAL / NTSC</p>
Video RGB-HD (SVGA)	<p>Connector: 1x 15-pin D-type</p> <p>Format: RGB H&V/YPrPb (switchable)</p>
SDI/HD-SDI/DVB ASI-C (switchable)	<p>Connector: 3x BNC 75 ohms</p> <p>3 Gbps HD-SDI standard: SMPTE 424M</p> <p>HD-SDI standard: SMPTE 292M</p> <p>SD-SDI standard: SMPTE 259M</p> <p>Embedded Audio: SMPTE 299M (HD) SMPTE 272M (SD)</p> <p>Embedded Audio Channels: up to 8x stereo pairs</p> <p>ASI standard: EN50083-9</p>

Data and Control Options

RS232 Remote Control and Data	<p>Remote control connector: 1x 9-pin D-type</p> <p>RS232 remote control</p> <p>MediaKind Alteia protocol</p> <p>RS232 data connector: 1x 9-pin D-type</p> <p>RS232 asynchronous data</p> <p>RS232 data rate: Max. 38.4 kbps</p>
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Data and Control Options

Features	<p>Program selection for ATSC, DVB and MPEG-only streams</p> <p>One alarm relay, two relays under SCTE 35 control</p>
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Control

Control	Front panel keypad and LCD SNMP control, traps and alarms Web browser
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Physical and Power

Dimensions (W x D x H)	442.5 x 545 x 44mm (17.5" x 20.7" x 1.75" approx.)
Input Voltage	110 VAC / 240 VAC
110 VAC / 240 VAC	100W Max. (depending on options fitted)
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

Compliance	CE Marked in accordance with all applicable EU Directives
EMC Compliance	EN55022, EN55024, EN61000-3-2, EN61000-3-3, AS/NZS CISPR 22, ICES-003 and FCC CFR47 Part 15B Class A
Safety Compliance	EN60950-1, IEC60950-1, UL 60950-1 and CAN/CSA-C22.2 No 60950-1. NRTL Listed.