Advanced Modular Receiver
The RX8200 Advanced Modular Receiver is the world’s bestselling IRD. Now with DVB-S2X and HEVC upgradeability it is also the most future-proof.

Broadcasters need to deploy receivers for many different tasks in many different operational circumstances. Ericsson’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.

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. Ericsson offers the complete low latency suite of tools for the user – whether that be high quality JPEG 2000 decoding for contribution over fiber applications or low latency MPEG-4 4:2:2 and 4:2:0 decoding for satellite applications.

Why Ericsson
The Ericsson 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.

Choosing which RX8200 Configuration Pack is right for your business is simple by using the following flow of questions:
## BASIC Decoder
### RX8200 Configuration Pack

(RX8200/CP/BASIC/SAT/A, FAZ 101 0113/225)
(RX8200/CP/BASIC/OFDM/A, FAZ 101 0113/226)
(RX8200/CP/BASIC/IP/A, FAZ 101 0113/227)

Entry level receiver capable of:
- Choice of satellite, OFDM, IP 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
- SD & HD video output interfaces
- 2x physical audio outputs
- Layer II, Dolby Digital & AAC audio decoding
- ASI output

### 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

### IP Input Option
- MPEG transport stream over IP
- 2x 100/1000 BaseT
- SMPTE 2022M ProMPEG FEC

## PREMIUM Decoder
### RX8200 Configuration Pack

(RX8200/CP/PREM/OFDM/A, FAZ 101 0113/228)
(RX8200/CP/PREM/IP/SAT/A, FAZ 101 0113/229)

As BASIC but adds:
- Frame sync
- Grade 1 down-conversion
- Up conversion
- Cross conversion
- 4x physical audio out
- IP TS out
- SMPTE 2022M ProMPEG FEC out
- MPE high speed IP data output
- Single service filtering

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

### 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/A, FAZ 101 0113/230)

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 16/32APSK

### 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
- MPEG transport stream over IP
- 2x 100/1000 BaseT
- SMPTE 2022M ProMPEG FEC
<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Options</th>
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<tbody>
<tr>
<td><strong>DSNG S2X Decoder</strong>&lt;br&gt;RX8200 Configuration Pack&lt;br&gt;(RX8200/CP/DSNG/IP/S2X/A, FAZ 101 0113/231)</td>
<td>As DSNG but:&lt;br&gt;- DVB-S2/S2X input up to 16APSK</td>
<td><strong>DVB-S2X Satellite/IP Input Option</strong>&lt;br&gt;- 4x L-band satellite inputs&lt;br&gt;- DVB-S QPSK and DVB-S2 QPSK, 8PSK demodulation&lt;br&gt;- Adds DVB-S2 16/32APSK&lt;br&gt;- DVB-S2 Low Symbol rate capability&lt;br&gt;- Adds DVB-S2X QPSK to 16APSK Capability&lt;br&gt;- MPEG transport stream over IP&lt;br&gt;- 2x 100/1000 BaseT&lt;br&gt;- SMPTE 2022M ProMPEG FEC</td>
</tr>
<tr>
<td><strong>EVENTS Decoder</strong>&lt;br&gt;RX8200 Configuration Pack&lt;br&gt;(RX8200/CP/EVENTS/IP/SAT/A, FAZ 101 0113/232)</td>
<td>As DSNG but adds:&lt;br&gt;- MPEG-2 4:2:2 SD/HD decoding&lt;br&gt;- MPEG-4 4:2:2 SD/HD decoding&lt;br&gt;- JPEG 2000 SH/HD Decoding&lt;br&gt;- HEVC 4:2:0 &amp; 4:2:2 Ready&lt;br&gt;- Phase Aligned Audio</td>
<td><strong>Satellite/IP Input Option</strong>&lt;br&gt;- 4x L-band satellite inputs&lt;br&gt;- DVB-S QPSK and DVB-S2 QPSK, 8PSK, 16/32APSK demodulation&lt;br&gt;- DVB-S2 Low Symbol rate capability&lt;br&gt;- MPEG transport stream over IP&lt;br&gt;- 2x 100/1000 BaseT&lt;br&gt;- SMPTE 2022M ProMPEG FEC</td>
</tr>
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<td><strong>EVENTS S2X Decoder</strong>&lt;br&gt;RX8200 Configuration Pack&lt;br&gt;(RX8200/CP/EVENTS/IP/S2X/A, FAZ 101 0113/233)</td>
<td>As Events but adds:&lt;br&gt;- DVB-S2/S2X input up to 32APSK</td>
<td><strong>DVB-S2X Satellite/IP Input Option</strong>&lt;br&gt;- 4x L-band satellite inputs&lt;br&gt;- DVB-S QPSK and DVB-S2 QPSK, 8PSK demodulation&lt;br&gt;- Adds DVB-S2 16/32APSK&lt;br&gt;- DVB-S2 Low Symbol rate capability&lt;br&gt;- Adds DVB-S2X QPSK to 32APSK Capability&lt;br&gt;- MPEG transport stream over IP&lt;br&gt;- 2x 100/1000 BaseT&lt;br&gt;- SMPTE 2022M ProMPEG FEC</td>
</tr>
<tr>
<td><strong>THE WORKS Decoder</strong>&lt;br&gt;RX8200 Configuration Pack&lt;br&gt;(RX8200/CP/WORKS/IP/S2X/A, FAZ 101 0113/234)</td>
<td>As EVENTS but adds:&lt;br&gt;- MPEG-4 1080p50/59.94 decoding&lt;br&gt;- Symulsync 3D/4k decoding&lt;br&gt;- Multi-service filtering</td>
<td><strong>DVB-S2X Satellite/IP Input Option</strong>&lt;br&gt;- 4x L-band satellite inputs&lt;br&gt;- DVB-S QPSK and DVB-S2 QPSK, 8PSK demodulation&lt;br&gt;- Adds DVB-S2 16/32APSK&lt;br&gt;- DVB-S2 Low Symbol rate capability&lt;br&gt;- Adds DVB-S2X QPSK to 32APSK Capability&lt;br&gt;- MPEG transport stream over IP&lt;br&gt;- 2x 100/1000 BaseT&lt;br&gt;- SMPTE 2022M ProMPEG FEC</td>
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Ericsson RX8200 Advanced Modular Receiver

**Specifications**

**Input**

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

**Satellite Input Options**

**2nd Generation Satellite Input, Satellite & IP input**

*(FAZ 101 0113/183, FAZ 101 0113/187)*
- 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
- Standard: EN300 421, EN303 307

**DVB-S2X Satellite Input**

*(FAZ 101 0113/207)*
- 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

**DVB-S2X 32APSK** *(FAZ 101 0113/206)*
- Modulation: DVB-S2X 32APSK
- Requires FAZ 101 0113/207 option

**IP Input**

**MPEG over Gigabit Ethernet IP Input, Satellite & IP input**

*(FAZ 101 0113/184, FAZ 101 0113/187, FAZ 101 0113/13, FAZ 101 0113/210)*
- Connector: 2 x RJ 45
- Format: 100/1000BaseT
- Max. input rate: 208Mbps
- SMPTE 2022M (Pro-MPEG) FEC

**DVB-T/T2 Input Options**

**DVB-T/T2 Input** *(FAZ 101 0113/70)*
- 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

**Conditional Access**

**Director by Ericsson**
- Director single service decryption
- Director over-air remote control
- Director over fingerprinting

**DVB Common Interface**
- Enables support for all major CAM modules
- Single service decryption
- Service pre-filtering

**BISS Decryption**
- Decryption of BISS Mode 1 and E

**RAS Decryption (FAZ 101 0113/52)**
- Decryption of Ericsson RAS 1

**Sample Configuration**

Sample configuration with: Satellite input, frame sync, HD video output, IP transport stream output and 2x Audio output modules installed.
**SPECIFICATIONS**

**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@L4 - All units
- MP@L3.1 - Needs MPEG-2 & 4:2:2 HW option
- Max. video rate: 25 Mbps - All units
- 62.5Mbps - Needs MPEG-2 & 4:2:2 HW option
- Video format: 1080i at 29.97 and 25 fps, 720p at 59.94, 60 and 50 fps

**HEVC SD Decode (FAZ 101 0113/220)**
- 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 (FAZ 101 0113/41)**
- Profiles: MP@ML
- 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 (FAZ 101 0113/41)**
- Profiles: MP@L4, HP@L4 - All units
- HP@L4.1 - Needs MPEG-2 & 4:2:2 HW option
- Max. video rate: 25 Mbps - All units, 62.5Mbps - Needs MPEG-2 & 4:2:2 HW option
- Video format: 1080i at 29.97 and 25 fps, 720p at 59.94 and 50 fps

**HEVC HD Decode (FAZ 101 0113/220)**
- 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

**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 (FAZ 101 0113/59)**
- Profile: 422@ML
- Max. video rate: 50 Mbps
- Video format: 480i and 576i 29.97, 25 fps

**MPEG-2 HD 4:2:2 (FAZ 101 0113/181)**
- 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 (FAZ 101 0113/181)**
- MPEG-4 Profile: 422HP@L3
- Max. video rate: 50 Mbps
- Video format: 480i and 576i 29.97, 25 fps

**HEVC SD 4:2:2 (FAZ 101 0113/221)**
- 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 - 50 Mbps
- Video format: 480i and 576i 29.97, 25 fps

**MPEG-4 AVC HD 4:2:2 Decode (FAZ 101 0113/181)**
- 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 (FAZ 101 0113/221)**
- HEVC Profiles: 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 - 50 Mbps
- Video format: 480i and 576i 29.97, 25 fps

**MPEG-4 AVC HD 4:2:2 1080p 50/60 decode (FAZ 101 0113/34)**
- 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

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**Audio Options**

**Balanced Audio Output (FAZ 101 0113/3)**
- 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

**Dolby® Digital Plus**
- 2x Dolby® Digital Plus 2.0/5.1 pass-through compressed and embedded in (HD)SDI

**AAC Audio (FAZ 101 0113/21)**
- 2x 5.1 down-mix to 2.0
- 2x 2.0 decode
- 1x 5.1 decode

**Phase Aligned Audio (FAZ 101 0113/49)**
- MPEG-1 Layer II audio
- 2x phase aligned groups of 4x stereo pairs, Phase aligned to enable 5.1 carriage
- Requires 4x audio license FAZ 101 0113/20

**4x Audio Capability (FAZ 101 0113/216)**
- Extends licensed audio decodes to more channels
- 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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*License key dependent
* Check availability

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**ERICSSON RX8200 ADVANCED MODULAR RECEIVER**

07-2015-v2
**SPECIFICATIONS**

**Video Processing**

- **High Quality Format-Conversion (FAZ 101 0113/188)**
- **Grade 1 quality down-conversion**
- **Simultaneous Down-conversion (HD to SD): center cut out, manual/AFD controlled**
- **Down-conversion from 1080p 50/60 to 1080i, 720p or SD**

**Up-conversion**

- **Non-simultaneous up-conversion (SD to HD): To 720p or 1080i (4:2:0 modes only)**
- **Cross-conversion**
  - **Non-simultaneous cross-conversion 720p to 1080p or 1080i to 720p**
  - **No frame rate conversion**

**Aspect Ratio Conversion**

- **16:9 to 4:3 center cut ARC in SD modes**

**Frame Synchronization (FAZ 101 0113/33)**

- **Enables Frame Sync**
- **Connector: 1x BNC (F) 75 Ohm**
- **Input signal: Analog SD HSync (black & burst)**

**VIDEO AND TS OUTPUT**

**Video Output**

- **HD and SD Video Output (FAZ 101 0113/10)**
  - **Composite Video**
    - **Connector: 1x BNC (F) 75 Ohm**
    - **Format: PAL / NTSC**
- **Video RGB-HD (SVGA)**
  - **Connector: 1x 15-pin D-type**
  - **Format: RGB H/V/YPr/Pb (switchable)**
  - **SDI/HD-SDI/DVBS CI-3 (switchable)**
    - **Connector: 3x BNC 75 ohms**
    - **3 Gbps HD-SDI standard: SMPTE 424M**
    - **HD-SDI standard: SMPTE 292M**
    - **SD-SDI standard: SMPTE 259M**
    - **Embedded Audio: SMPTE 299M (HD)**
    - **SMPTE 272M (SD)**
    - **Embedded Audio Channels: up to 8x stereo pairs**
    - **ASI standard: EN50083-9**

**STANDARD FEATURES**

**Features**

- **Program selection for ATSC, DVB and MPEG-only streams**
- **One alarm relay, two relays under SCTE 35 control**

**Control**

- **Front panel keypad and LCD**
- **SNMP control, traps and alarms**
- **Web browser**

**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**
- **Power Consumption**
  - **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**

- **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.**

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**TS Output**

- **For ASI Out See HD & SD video out options**

**IP Output (FAZ 101 0113/189, FAZ 101 0113/13)**

- **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**

**Stream Processing Options**

- **Multi-Service Filtering (FAZ 101 0113/47)**
  - **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**

**Data and Control Options**

- **RS232 Remote Control and Data (FAZ 101 0113/17)**
  - **Remote control connector: 1x 9-pin D-type**
  - **RS232 remote control**
  - **Ericsson Alteia protocol**
  - **RS232 data connector: 1x 9-pin D-type**
  - **RS232 asynchronous data**
  - **RS232 data rate: Max. 38.4 kbps**

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**ERICSSON RX8200 ADVANCED MODULAR RECEIVER**

*Ericsson maintains a policy of product improvement and reserves the right to modify the specifications without prior notice.*