Zodiac Data Systems introduces the compact & rugged version of the worldwide acclaimed Cortex RTR receiver. This version provides the same performances and power of the Cortex RTR receiver for single and dual channel configuration.

Alike Cortex RTR, all bands (IF, C-IF, P, L, S and C), pre-D combiner, multimode demodulator (Tier 0, 1 & 2) and bit / frame synchronization with TM data distribution on Ethernet are supported... without compromising performance. Indeed, the Cortex RTR high end features are preserved like the outstanding RF front end and the unmatched processing performance (fast re-acquisition time, sensitivity and high rate combiner).

RX-1 light weight and compactness is ideal for mobile applications when rack space is a constraint and for situations where frequent handling and shipment are required.

Finally, the risk of damaging the receiver during the frequent shipments through carrier is significantly reduced.

Clubbed with the compact COMTRACK antenna, it provides an unequalled compactness and deployability of your turn-key receiving ground station.

Main Features

- Single, dual channels IF/CIF/P/L/S/C band (fully independent)
- Tier II phase noise compliant
- Optimum ratio Pre-D combiner with automatic Best Source Selector mode
- Enhanced Adaptive Equalizer*  
  * Proven best performance equalization on the market. Able to cancel co-channel interference like STC, but also, Outperforms other state-of-the-art equalizers for Multipath Mitigation
- Up to 3 multi-mode demodulator Tier 0, 1, 2 (PCM-FM, SOQPSK, Multi-h CPM)
- Unprecedented multi-h CPM BER & acquisition time
- AM demodulation for antenna tracking
- Supports LDPC decoder (rates 1/2; 2/3; 4/5) with SOQPSK demodulator
- Up to 3 embedded 30Mbps bit and frame synchronizers with telemetry over IP (TMoIP)
- Chap 10 Ethernet throughput output
- Data Quality Metric / Encapsulation (DQM/DQE)
- Spectrum viewer, eye diagram & constellation diagram
- 100% in-house designed product

Main Benefits

- More compact solution without compromising performance
- Easier shipment, handling and Integration
- Transport cost reduced
- No tuning, no preventive maintenance
RX-1 Compact Receiver

ORDERING INFORMATION

RX-1-2RF-3D SM01062694

Options
- Direct C-band 4400 - 5250 MHz
- STC demodulator in SOQPSK
- LPDC decoders with SOQPSK
- Enhanced adaptive Equalizer
- Telemetry over IP (ch10 UDP throughput, RCC218, STI100013)

Technical specifications

Radio
- Frequency range (and/or)
  - C-band 4400 – 5250 MHz
  - C-IF-band 300 – 1150 MHz
  - S-band 2180 – 2485 MHz
  - Upper L-band 1710 – 1850 MHz
  - Lower L-band 1429 – 1545 MHz
  - P-band 200 – 500 MHz
  - IF 70 MHz
- RF inputs / outputs up to 2 [N-type 50 Ω]
- IF inputs / outputs up to 2 / 2
- Dynamic range -10 dBm to noise threshold
- Non destructive level + 10 dBm
- Noise figure < 9 dB (6 dB typ.)
- Spurious signal rejection > 60 dBc
- VSWR < 2 : 1
- Phase noise IRIG 106-07 Tier II compliant
- IF analog filters 8 pre-selection SAW
  (500 kHz to 40 MHz)

Signal processing
- IF filters 30 FIR digital filters (3 kHz to 40 MHz)
- AGC modes Automatic / Manual / Freeze
- AGC time constants 5 (0.1 to 1000 ms)
- AM response from AGC cut-off to 50 kHz
- Diversity combiner Polarization (or space) & Frequency
- Combiner balance control Equalizes CH1/CH2 noise floors
- Combiner modes Pre-D dual channels with optimal ratio and automatic best source selection
  (CH1/CH2 fade level of 5 dB)
- Pre-D gain > 2.5 dB for two identical SNR
- Pre-D tape recording & playback 5 kHz to 10 MHz
- Demodulation FM, AM (auto-tracking), SOQPSK, Multi-h CPM, STC
- Video filtering 17 digital filters (12.5 kHz to 40 MHz)
- De-emphasis (TV) CCIR 405-1 (525 or 625 lines)
- Bit synchronizers RS422 and/or TTL outputs
- PCM codes NRZ-L/M/S, BP-L/M/S, DM-M/S, differential, RNRZ-L...
- Bit rates (max) PCM/FM (trellis) 30 Mbps
  SOQPSK 55 Mbps
  Multi-h CPM 49 Mbps
- Decoders LDPC (rates 1/2; 2/3; 4/5)
  (block 4k, 1k)

Miscellaneous
- M&C local or remote PC (via TCP-IP)
- Rackable chassis 19", 1 U, 508 mm (20")
- Weight <10kg (22lbs)
- Operating temperature 0°C to +50°C (32°F to 122°F)
- Power supply 100-240 VAC, 50-60 Hz

CONTACTS

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