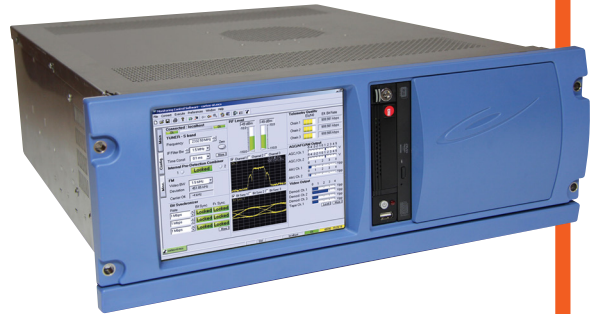




# RTR

**Radio Telemetry Receiver**  
for range and industrial testing



TELEMETRY GROUND SOLUTIONS



Safran Data Systems' RTR is the **worldwide acclaimed COTS telemetry receiver**. The latest release strengthens its position as the **most advanced digital telemetry receiver** on the market, while keeping the well-recognized **RF performance** and **signal processing capability**.



Launch Vehicle Telemetry

Based on the Cortex architecture, the 4U chassis-based RTR can support **up to four channels** providing **the utmost flexibility and capability** a Telemetry Receiver can achieve.



Missile Testing

Not only the RTR provides a **rich set of features** for different frequency bands, modulations, decoders and output formats, but the user can **easily upgrade the equipment in the field** to access additional and new features.



Fixed & Rotary Wing

The RTR fits particularly the flight tests ranges where **a full flexibility and access to settings** is needed, through its easy-to-use intuitive GUI on the embedded 8,4" screen.

### SINGLE, DUAL, QUAD

Full Flexibility of Configurations

### EQ+

Adaptive Equalizer for all Modulations, on Video and PCM Outputs

### 8.4" SCREEN

Intuitive GUI, Keyboard and Trackball for Full and Easy Direct Control

### DQM/DQE

Embedded Data Quality Metrics / Encapsulation compatible with BSS

### CH.10 OUTPUT

Easy and Modern UDP Data Spreading

> ANALOG FRONT-END

**RF Input Signals**

RF Inputs ..... Up to 4 (N-type 50 Ω)  
 Input Frequency Range ..... S-band 2180 – 2485 MHz  
 ..... L-band 1710 – 1850 & 1429 – 1545 MHz  
 ..... P-band 200 – 500 MHz  
 ..... C-IF-band 300 – 1150 MHz  
 ..... C-band 4400 – 5250 MHz  
 Dynamic Range ..... -10 dBm to noise threshold  
 Noise Figure ..... < 9 dB (6 dB typ.)  
 Spurious Signal Rejection ..... > 60 dBc  
 VSWR ..... < 2 : 1

**IF inputs/outputs**

IF Inputs ..... Up to 4 @ 70 MHz  
 IF Outputs ..... Up to 6 (RSR interface)

> SIGNAL PROCESSING

**IF Filtering**

Analog Filters ..... 8 pre-selection SAW (500 kHz to 40 MHz)  
 Digital Filters ..... 30 FIR IF (3 kHz to 40 MHz)  
 Phase Noise ..... Compliant to IRIG 106 Tier II

**AGC**

Modes ..... Automatic / Manual / Freeze  
 Time Constants ..... 5 steps, 0,1 to 1000 ms

**Tracking**

Demodulation ..... AM

**Telemetry**

Demodulation ..... PCM-FM, MSFM, SOQPSK, Multi-h CPM  
 ..... PCM-PM, BPSK, QPSK, OQPSK, AUQPSK, Subcarriers,  
 Advanced Demodulation ..... Space Time Coding (STC), COFDM  
 Diversity ..... Polarisation, Space & Frequency  
 Combiner ..... Pre-D and Post-D  
 ..... Pre-D with optimal ratio or best source selection  
 ..... Pre-D gain up to 2.5 dB  
 Baseband Filtering ..... 17 digital filters (12.5 kHz to 20 MHz)  
 De-emphasis ..... CCIR 405-1 (525 or 625 lines)  
 Error Correction ..... Viterbi, Reed-Solomon, Turbocodes & LDPC

**Bit Synchronizer**

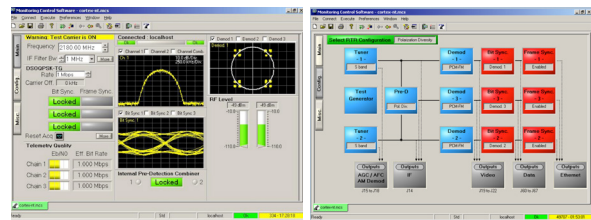
Output Format ..... RS422 and/or TTL  
 PCM Codes ..... NRZ-L/M/S, BP-L/M/S, DM-M/S, differential, RNRZ-L  
 Maximum Bit Rates ..... 30 Mbps in PCM/FM  
 ..... 60 Mbps in SOQPSK  
 ..... 45 Mbps in Multi-h CPM

> EQ+ ADAPTIVE EQUALIZER

Modulations ..... All, i.e. PCM-FM, SOQPSK & Multi H-CPM  
 Equalized Outputs ..... Video, PCM & Ethernet  
 Performance ..... Market-acclaimed error-free telemetry  
 on taxi way, on parking & before launch  
 for missiles / launch vehicles

> MONITORING & CONTROL

Local Control ..... 8,4" screen, keyboard and trackball  
 GUI ..... Intuitive & fully customizable  
 Remote Control ..... Same GUI, thru TCP-IP



> ENVIRONMENT

Chassis ..... Rackable, 19", 4U, 550 mm (21")  
 Weight ..... <25kg  
 Operating Temperature ..... +10°C to +50°C  
 Storage Temperature ..... -40°C to +70°C  
 Power Supply ..... 100-240 VAC, 50-60 Hz

> VARIANTS

Baseline ..... RTR-NeXt Single/Dual/Quad channel  
 ..... S-band, AM, PCM-FM & Bit Synchronizer  
 Additional Band ..... P-band, C-IF band, L band, C-band  
 Additional Demodulation ..... SOQPSK, MH-CPM, PM, BPSK, QPSK,  
 ..... STC, COFDM, Subcarriers...  
 Additional FEC ..... Viterbi, Reed-Solomon, Turbocodes & LDPC  
 Additional Features ..... Equalizer EQ+, DQE/DQM...  
 Additional Interfacing ..... Frame Sync, Ethernet ch10...

GLOBAL SALES

5, Avenue des Andes - CS 90101 - 91978 Courtaboeuf Cedex - FRANCE - Tel.: +33 1 69 82 78 00 - Email: sales.sdsy@safrangroup.com

USA

3005 Business Park Dr - Norcross, GA 30071 - USA - Tel.: +1 770 753 4017 - Email: sales@SafranDataSystemsUS.com