



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**.

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.

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.

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.



Launch Vehicle Telemetry



Missile Testing



Fixed & Rotary Wing

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
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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

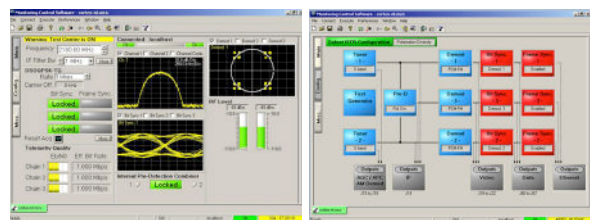
Output Format	RS422 and/or TTL
PCM Codes	NRZ-L/M/S, BP-L/M/S, DM-M/S, differential, RNRZ-L
Maximum Bit Rates	30 Mbps in PCM/FM
.....	60 Mbps in SOQPSK
.....	45 Mbps in Multi-h CPM

> 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

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