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.

**SINGLE, DUAL, QUAD**
- Full Flexibility of Configurations

**DQM/DQE**
- Embedded Data Quality Metrics / Encapsulation compatible with BSS

**EQ+**
- Adaptive Equalizer for all Modulations, on Video and PCM Outputs

**CH.10 OUTPUT**
- Easy and Modern UDP Data Spreading

**8.4” SCREEN**
- Intuitive GUI, Keyboard and Trackball for Full and Easy Direct Control

**Launch Vehicle Telemetry**

**Missile Testing**

**Fixed & Rotary Wing**
TELEMETRY GROUND SOLUTIONS

RTR

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 MHz & 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
- **Diversity**: PCM-FM, BPSK, QPSK, OQPSK, AUDPSK, Subcarriers, Space Time Coding (STC), COFDM
- **Combining**: Pre-D and Post-D with optimal ratio or best source selection
- **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
- 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
- P-band, C-IF band, L-band, C-band
- SOQPSK, MH-CPM, PM, BPSK, QPSK, AUDPSK, Subcarriers...
- STC, COFDM, Subcarriers...
- Viterbi, Reed-Solomon, Turbocodes & LDPC
- Equalizer EQ+, DQE/DQM...
- Frame Sync, Ethernet ch10...

GLOBAL SALES

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USA

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SAFRAN

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