

DATA SYSTEMS



CORTEX HDR

High Data Rate Receiver
for Space Science
and Earth Observation



SATELLITE TRACKING SOLUTIONS



Safran Data Systems' **Cortex HDR** is your solution for high data rate transmissions in **X, Ka and wider bands**. With more than 1000 Cortex HDRs deployed worldwide, this is the risk-free solution for data reception for your ground station.

Tailored for future generations, it can handle high speed demodulation of up to six channels with an aggregate bit rate **as high as 10 Gbps**. With its flexible satellite check-out interfaces, it will make your next mission qualification easier and faster.



Commercial
Earth Observation
Satellites



Relay
Satellites



Scientific
Missions

1000+ UNITS IN USE

Dependable Long Term Support

DEAF AND X-DEAF

1-Click Equalization & X-Pol Correction

WIDE BAND RECORDER

RF Recording & Playback

10 GBPS DEMODULATION

Most Powerful in Market

FEP AND STORAGE

Cost-Effective Single-Box Integration

THE FUTURE, OFF-THE-SHELF

CORTEX HDR

> ANALOG FRONT-END

IF Inputs

Tunable Center Frequency 720 MHz / 1.2 GHz / 2.4 GHz
 Aggregate Bandwidth Up to 4,6 GHz
 Independant IF Inputs 2

Wide Band Recorder (WBR)

IF Record & Replay 600 MHz Bandwidth
 Signal Distortion <0,1 ns

Test Modulator

Multi-Channels 2 IF / 3 Channels per IF
 Data Playback Patterns, Recorded Data, Digitized IF
 Simulation Noise, Doppler & XPI Generation
 AIT Interfaces ECL/LVDS/WizardLink

> SIGNAL PROCESSING

Modulations

Multi-Channels Up to 6
 Modulation Schemes BPSK, (A/U/O/S)QPSK, 8PSK, GMSK,
 16APSK, 16QAM, 32 APSK, 64 APSK

Filtering

Type Static/DEAF (Auto-Adaptive)
 Cross Pol Cancellation XDEAF

Decoding

Variable Coding & Modulation DVB-S2, DVB-S2X, SCCC
 Static Viterbi, TCM, Reed Solomon, LDPC (7/8 and AR4JA)

> FRONT-END PROCESSING

CCSDS Processing

Data Processing Raw, CADU, VCDU, CFDP
 Protocol AOS, TM Space Data Link, SLE

Interfaces & Storage

Real Time Data Output 1 or 10 GigE (Raw, Processed Data), ECL / LVDS
 Storage Up to 20 TB
 FTP File Retrieval

> TOOLS

Measurements BER, Eb/N0, Frequency, Doppler & XPD
 Signal Retrieval Automatic Ambiguity Resolution
 Monitoring & Control Remote, Local, Scheduler
 Signal Monitoring Spectrum & Constellation Display

> TIME & FREQUENCY

Time IRIG-B or NASA-36
 Frequency 5 MHz, 10 MHz Internal / External Clock

> ENVIRONMENT

Chassis Size 19-inch Rackmountable (4U)
 Chassis Weight 25 kg / 55 lb
 Operating Temperature +10°C to +40°C / +50°F to +104°F
 Power Supply Redundant

Version Determines Cost – No Licenses



The Right One for Your Needs!

GLOBAL SALES

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