

## DATA SYSTEMS



# CORTEX HDR

**High Data Rate Receiver  
for Space Science  
and Earth Observation**

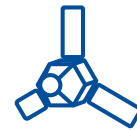


SATELLITE TRACKING SOLUTIONS



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**

## > ANALOG FRONT-END

### IF Inputs

Tunable Center Frequency ..... 720 MHz / 1.2 GHz / 2.4 GHz  
 Aggregate Bandwidth ..... Up to 4,6 GHz  
 Independent 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/NO, 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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