

ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

Artisan Technology Group
(217) 352-9330 | sales@artisantg.com | artisantg.com

Full-service, independent repair center
with experienced engineers and technicians on staff.

We buy your excess, underutilized, and idle equipment
along with credit for buybacks and trade-ins.

Custom engineering
so your equipment works exactly as you specify.

- Critical and expedited services
- In stock / Ready-to-ship
- Leasing / Rentals / Demos
- ITAR-certified secure asset solutions

Expert team | Trust guarantee | 100% satisfaction

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Visit our website - *Click HERE*

DATA SYSTEMS



SPACE AGENCIES

Ground Products and Solutions

SAFRAN

SAFRAN DATA SYSTEMS, SPACE AGENCIES

Maintain the link with any type of satellite from anywhere on the globe, Safran Data Systems has the solution.



TRACKING GROUND ANTENNAS

DEEP SPACE PROBES

GEO SATELLITES

LOW EARTH ORBIT SATELLITES

LAUNCH VEHICLES

SPACE APPLICATIONS

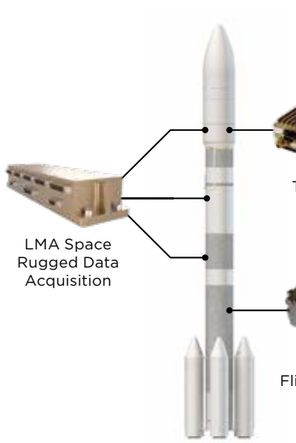
SERVED BY SAFRAN DATA SYSTEMS:

- ONBOARD TELEMETRY (LAUNCH VEHICLE)
- HIGH DATA RATE EARTH OBSERVATION TELEMETRY RECEPTION
- GROUND-BASED TRACKING STATIONS
- SATELLITE HOUSEKEEPING (TT&C)
- ORBIT DETERMINATION

KEY CONSIDERATIONS

- #1 IN SPACE TELEMETRY
- 1000+ SATELLITES SUPPORTED
- 250+ TRACKING GROUND STATIONS DEPLOYED
- 50 YEARS OF EXPERIENCE
- 5000+ CORTEX DELIVERED

LAUNCH WITH CONFIDENCE






Advantys


Telemetry Receivers
and Recorders

End-to-End Launch Vehicle Telemetry

Time-Proven Air and Ground Telemetry Systems for Launch Success

ON-BOARD TELEMETRY
SIGNAL CONDITIONNING

MODULAR AND COMPACT SIGNAL CONDITIONNING AND DATA ACQUISITION

- Multi-Stage Acquisition Architecture
- Transmitters
- Flight Termination Systems

LAUNCH PAD & DOWN RANGE
SPARTE SERIES

A COMPLETE COTS PRODUCT PORTFOLIO WITH VARIOUS SIZES, FIXED & MOBILE, LAND & SHIPBORNE ANTENNAS

- From RF to Decommutation & Display
- Telemetry and Optical Trackers
- Standard and Custom Form Factors

LOW EARTH ORBIT

YOUR GROUND NETWORK IN MOTION

© Photo: Airbus



CORTEX HDR

TRI-BAND ANTENNAS

Turnkey Tracking Ground Station

Multi-Application Ground Solutions for LEO Satellites to Moon missions & tracking antennas

SATELLITE TRACKING
LEGION/VISION/ORION

HIGH RELIABILITY FULL MOTION SYSTEMS

- Ready for Next Generation
- Unique Concentric Triband S-X-Ka Feed Design
- Space Diversity Combining

HIGH RATE PAYLOAD DATA
CORTEX HDR

RF & LASER LINKS: THE FUTURE, OFF-THE-SHELF

- 10 Gbps Demodulation
- Hassle Free Equalization & X-Pol Cancellation
- RF Signal Record & Replay

COLLECTION, CONVERSION AND AMPLIFICATION
RADIO FREQUENCY

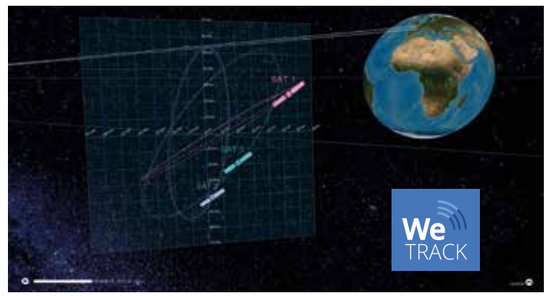
100% IN-HOUSE CRITICAL COMPONENTS DESIGN & MANUFACTURING FOR LONG TERM SUSTAINMENT

- Feeds
- Converters
- Power Amplifiers

GEOSYNCHRONOUS & DEEP SPACE

RESILIENT SATELLITE HOUSEKEEPING





WETRACK™



CORTEX CRT

Secure Your Space Assets

Multi-Applications Ground Solutions for GEO Satellites

GEOSTATIONNARY
CORTEX CRT / NuRoN

KEEPING YOUR SATELLITES AT THE RIGHT SPOT IS OUR LEGACY

- The World TT&C Standard
- Mastering all Ranging Techniques
- Network Distributed Architecture

SITUATIONAL AWARENESS
WETRACK™

ORBITAL DATA AS A SERVICE

- Fully Passive System
- Retrieving and Propagating Ephemeris
- Geolocate all Transmitting Sites

DEEP SPACE TELEMETRY
CORTEX EXPLORER

COTS TT&C FOR SPACE EXPLORATION MISSIONS

- To Mars and Beyond
- Delta-DOR and other Ranging Techniques

CHECKOUT & TESTING



Photo © NASA



Converters



CORTEX DTR



CORTEX HDR



CORTEX CRT

Go for the Blue

Choose Excellence for Testing

CORTEX

TESTING BEYOND EXPECTATIONS
CORTEX HDR / CORTEX CRT

FLEXIBLE A.I.T. BASEBAND UNITS

- Signal & Noise Generation
- Doppler and Cross-Polarization Simulation
- Multi-Format Interfaces

SIGNAL AND SYSTEM ANALYSIS
CORTEX RSR / CORTEX WBR

INNOVATIVE SOLUTIONS TO OPTIMIZE SATELLITE TESTING

- High Fidelity Signal Record & Replay
- Ultimate Satellite Compatibility Suitcase
- 24/7 Station Troubleshooting

CORTEX Products

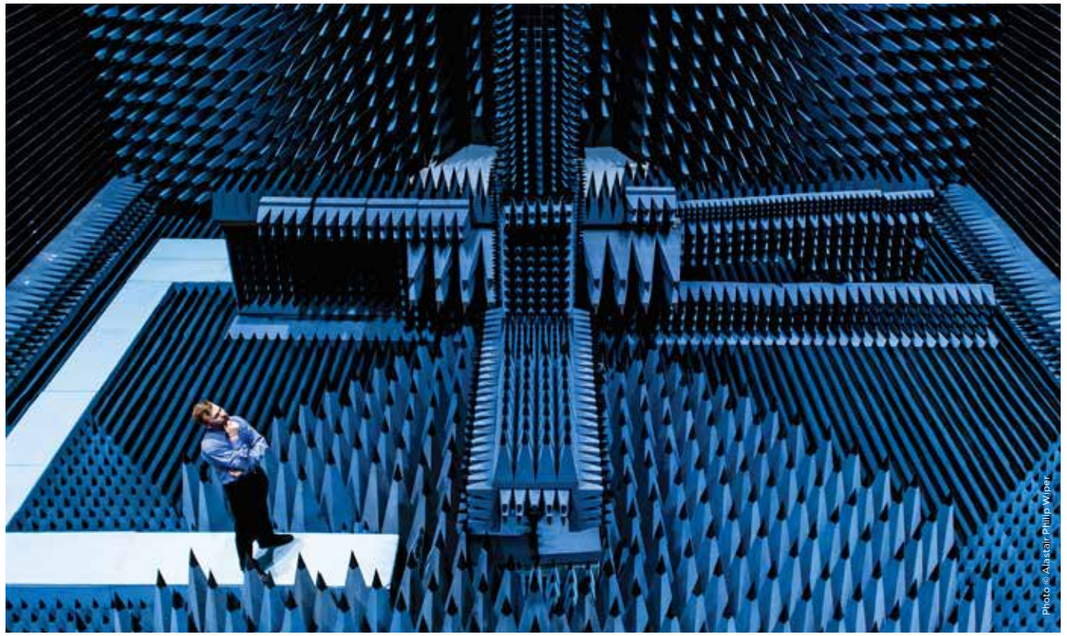
	CORTEX CRT TT&C Modem	CORTEX HDR High Rate Payload Demodulator
	The Universal TT&C Modem, World Reference for Securing Operations for the past 20 years	**The Most Powerful and Flexible High Data Rate Demodulator for Earth Observation Payload**
	Narrowband Communications in S-Band, L-Band, X-Band	Wideband Communications in X-Band and Ka-Band
Key Features	Doppler Compensation Diversity combining Pre-D and Post-D Spread Spectrum Real Time Automatic Equalizer – DEAF	Real Time Automatic Equalizer – DEAF Cross-Polarization Cancellation - XDEAF Diversity Combining
Downlink	Up to 40 Mbps, 6 Channels, 3 Inputs	Up to 10 Gbps, 6 Channels, 2 Inputs
Ranging	Active, Semi Active, Hybrid	-
Telecommand	Up to 1 Mbps, 2 Outputs	-
Test Modulator	Noise Generation Data Playback	Dual IF-out, Noise, Doppler & XPD Generation Group Delay Simulation Data Playback
Interfaces	70 MHz, L-Band, S-Band	720 MHz, 1.2 GHz, 2.4 GHz 2 Inputs for Dual Polarization Transmissions
	2 x 1 GigE	2 x 1 GigE, 2 x 10 GigE
	Multiple Test Points	A.I.T. Interface: ECL/LVDS/Wizardlink
Data Recording and Processing	RAW, CADU Up to 500 GB Storage	RAW, CADU, VCDU, APID Up to 12 TB Storage
Miscellaneous	SLE, COP-1, STI 100113	SLE, STI 100113

	CORTEX RSR Record and Replay	CORTEX WBR Record and Replay
Record & Replay Aggregate Bandwidth	Up to 160 MHz	Up to 600 MHz
Interfaces	70 MHz, L-Band, S-Band	720 MHz, 1.2 GHz, 2.4 GHz
	2 x 1 GigE	2 x 1 GigE, 2 x 10 GigE
Quality of Signal	Degradation <0.5 dB	Group Delay Variation <0.1 ns
Recording Time at Full Rate	Up to 5h	Up to 5h

	Converters		
	S-Band	X-Band	Ka-Band
Models	Up and Down	Up and Down	Up and Down
RF Interface	Up: 2025 - 2120 MHz Down: 2200 - 2300 MHz	7900 – 8500 MHz	25.5 – 27.0 GHz
IF Interface	70 MHz	720 MHz	1200 MHz 1550 MHz 2400 MHz
Impedance	50 Ohms	50 Ohms	50 Ohms
VSWR	< 1.3	< 1.4	< 1.5

Ground Station Specifications

	MODEL	LEGION 400	VISION 610 / 730	ORION 730	ORION 930	ORION 1100	ORION 1300
	DIAMETER	3,9 m	5,5 m	7,3 m	9,3 m	11,5 m	13,5 m
	CONFIGURATION	Mono, Bi or Tri-Band X or S+X or S+Ka or S+X+Ka					
X-Band RX [7,900 – 8,500 GHz]	G/T Mid-Band, 5° Elevation, Clear Sky, +20°C, Continental bi board	26,5 dB/K	>30,5 dB/K	>33 dB/K	>34,5 dB/K	>36,5 dB/K	>36,5 dB/K
	Rx Polarization	LHCP and RHCP (simultaneous)					
	Specific Filtering	Included – Radar Low Pass Filter or Band Pass Filter					
S-Band RX [2,200 – 2,300 GHz] TX [2,025 – 2,120 GHz]	G/T Mid-Band, 5° Elevation, Clear Sky, +20°C, Continental	>13,5 dB/K	>17 dB/K	>19,5 dB/K	>21,5 dB/K	>23,5 dB/K	>25 dB/K
	Rx Polarization	LHCP and RHCP (simultaneous)					
	EIRP @Psat Baseline	45 dBW	56 dBW	58 dBW	60 dBW	61,5 dBW	62,5 dBW
	Tx Polarization	LHCP or RHCP (switchable)					
Ka-Band RX [25,500 – 27,000 GHz]	G/T Mid-Band, 5° Elevation, Clear Sky, +20°C, Continental	>31,5 dB/K	>35 dB/K	>37,5 dB/K	>39,5 dB/K	>41,5 dB/K	>43 dB/K
	Rx Polarization	LHCP and RHCP (simultaneous)					
Mode of Operations	Auto-Track Mode	Single Channel Monopulse – Triband/Polarization switchable in each band (SAFRAN patented)					
Accuracies	Tracking Accuracy	0,03°rms	0,03°rms	0,02°rms	0,02°rms	0,02°rms	0,02°rms
	Pointing Accuracy	0,04°rms	0,05°rms	0,04°rms	0,04°rms	0,04°rms	0,04°rms
Environmental Conditions	Operating Wind S/X-Band	90 km/h gust	90 km/h gust	110 km/h gust	90 km/h gust	90 km/h gust	90 km/h gust
	Operating Wind Ka-Band	90 km/h gust	90 km/h gust	90 km/h gust	80 km/h gust	90 km/h gust	90 km/h gust
	Operating Temperature	-20°C to +50°C -40°C to +50°C with available options: winter package, deicing, radome					



AN OUTSTANDING INNOVATION CAPABILITY

Market-driven innovation is the heart of Safran Data Systems strategy to bring the best solutions to Space Agencies' issues. With leading-edge R&D centres located in Europe and North America, we use the most progressive, multidisciplinary technologies to meet changing market demands.

The Recipe of Success

- 10% of consolidated revenues invested in R&D
- 5 new patents filed each year
- 300 engineers
- 5 PhDs graduation each year

Main Subjects

- Beam Forming Antennas Array
- Signal Processing for Modems
- High Bandwidth Equipment Design
- Mechanical Structure Stress Analysis
- Radiation Hardening

Partner of the World's Best Aerospace Institutes

- ISAE-Supaero
- Van Allen Foundation (affiliated to the 1st French University Space Centre)
- X-LIM

Partner of Worldwide Space Agencies, and in particular

- CNES
- ESA

Space Agencies are tasked with mastering Space elements. Challenging daily activities require systems, products and services maintained and supported by Safran Data Systems, your reliable long term partner.

Our mission at Safran Data Systems is to support customers with our extensive knowledge and wide range of application expertise. There is no substitute, for demanding operational requirements, than Safran Data Systems' products and services which use the latest technology while building on years of experience. With Safran Data Systems, customers have the best value high quality products and services in the global industry.

With a complete end-to-end launch vehicle link, a large portfolio of full-motion antennas, a complete range of RF equipment, the comprehensive Cortex series, Safran Data Systems provides you today with reliable solutions for tomorrow.

We stand by our products and provide support to our customers to ensure mission success.

Safran Data Systems' products, services and support are the risk-free choice for all space programs.

POWERED BY TRUST

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SAFRAN

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Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

Learn more!

Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

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