

DATA SYSTEMS



# EARTH OBSERVATION

Ground Products & Services



# CONNECTING SPACE



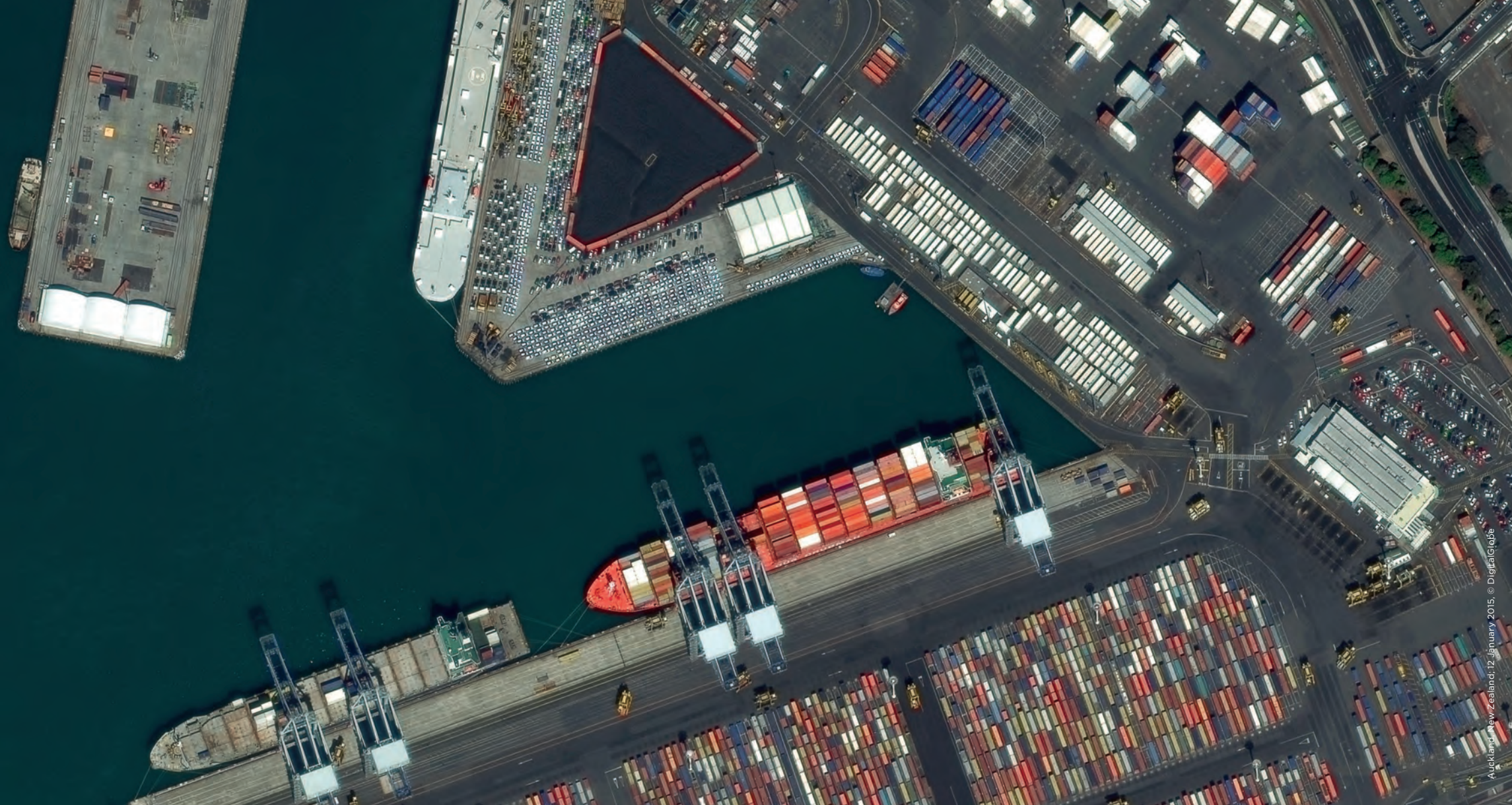
CONTROL YOUR E/O PAYLOAD OR ACCESS TO WHATEVER SATELLITE IMAGERY SAFRAN DATA SYSTEMS IS THE SOLUTION

## Suitable for every application

Safran Data Systems systems are based on state-of-the-art, standalone architecture, suitable for civil and military purposes

- Fixed Ground Stations (2.4 m to 11 m)
- Mobile Ground Stations (2.4 m to 5.5 m)
- Proven Multi-Satellite

# TAILORED TO YOUR REQUIREMENTS



AXS SERIES



PRO SERIES

## Different Markets, Different Products, Same Quality

### AXS SERIES

GROUND STATION AS A COMMODITY

ALL SAFRAN DATA SYSTEMS EXPERTISE  
IN A SIMPLIFIED OPERATIONAL SYSTEM

- ▶ S/X band receive & transmit
- ▶ Software tracking (Hexatrack)
- ▶ Satcore: Payload receiver  
+ TT&C modem in one box

### PRO SERIES

FIT FOR THE FUTURE

TURNKEY SYSTEMS AND BEST  
PERFORMANCES, READY FOR NEXT  
GENERATION SATELLITES

- ▶ S/X/Ka band or Ka ready
- ▶ Monopulse tracking
- ▶ Cortex Series

# SOLUTIONS FOR YOUR NEED



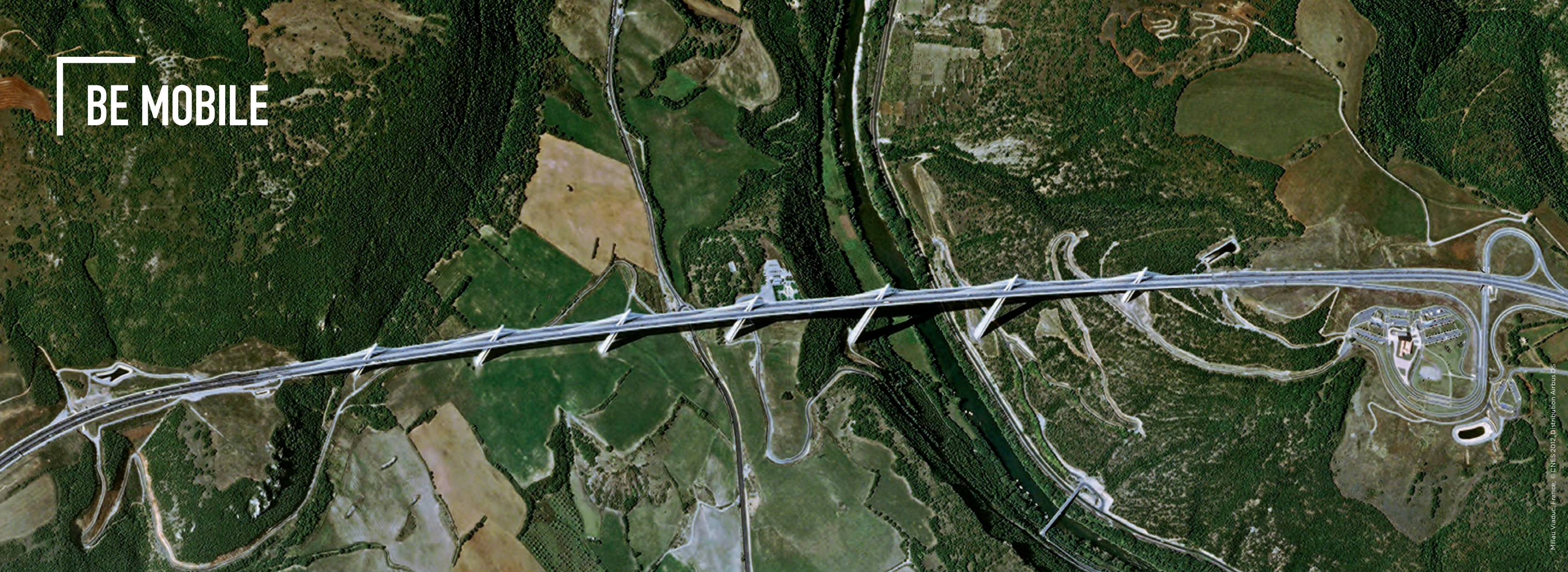
## Earth Observation

### Antenna Portfolio



MODEL	AXS 370	AXS 550	PRO 370	PRO 550	PRO 730	PRO 930	PRO 1100	MIL 240	MIL 550
DIAMETER	3.7 m	5.5 m	3.7 m	5.5 m	7.3 m	9.3 m	11 m	2.4 m	5.5 m
CONFIGURATION	S or X or S/X		S/Ka	X or S/X or S/Ka or S/X/Ka	S or X or S/X or S/Ka or S/X/Ka			X or S/X	
AUTOTRACK	Hexatrack		Monopulse						
RADIO FREQUENCY	Single Polarization Dual Polarization in option		Simultaneous Dual Polarization in all bands						
BASEBAND	Optional		Included						
MONITORING & CONTROL	Antenna level/System level in option		System level						

BE MOBILE



Milieu Vidéo-France © CNES 2012, Distribution Airbus DS



MIL 240



MIL 550

## MIL SERIES

State-of-the-art transportable systems

### MIL 240 THE ULTIMATE TACTICAL SOLUTION

- ▶ Ultracompact
- ▶ 30 mn deployment
- ▶ S/X band

### MIL 550 DESIGNED FOR OPERATIONAL THEATERS

- ▶ Superior performance
- ▶ 3h deployment
- ▶ S/X band

# GO FOR THE BLUE: CHOOSE EXCELLENCE

Heron Island, Australia, © Airbus DS 2012



## HIGH DATA RATE RECEIVER

CORTEX HDR

### THE FUTURE, OFF-THE-SHELF

- X, Ka and wider bands risk free reception
- 10 Gbps, market fastest demodulator
- 3 versions: Run, Sprint & Bolt

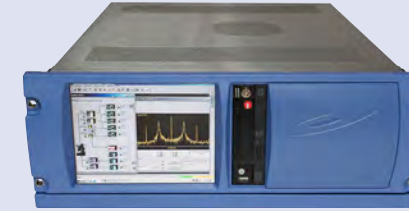


## THE COMBO-BOX EQUIPMENT

SATCORE

### LEAN OPERATIONS

- Payload receiver & TT&C modem in 1 box
- Plug-and-Play
- Multi-mission preloaded



## COMMAND RANGING & TELEMETRY

CORTEX CRT

### THE WORLD TT&C STANDARD

- Safe & continuous for more than 20 years
- Reference equipment for all satellites
- Ready for future standards



## FREQUENCY CONVERTERS AND SSPA

### UTMOST PERFORMANCES

- Ka, X and S band
- 100% in-house
- Designed for easy interfacing with Cortex Series

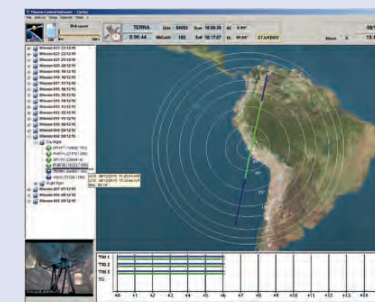


## DIGITAL TRACKING RECEIVER

CORTEX DTR

### CORTEX CENTRIC

- Multi-channel monopulse tracking
- Cortex ICD
- Comprises Safran Data Systems ACU



## MONITORING AND CONTROL SOFTWARE

MCS

### USER FRIENDLY GUI

- Multi-mission and conflict management
- Configure and monitor your whole ground station
- Pass reports and analysis

YOU ARE AT THE FRONT,  
WE ARE AT YOUR SIDE

Dnieper River, Ukraine, 30 July 2013. © DigitalGlobe

## Customer Support

Constant operations at lean expenses

TAILOR THE MAINTENANCE OF YOUR GROUND STATION, FROM BASIC TROUBLESHOOTING HOTLINE TO COMPLETE ISSUE HANDLING BY SAFRAN DATA SYSTEMS PERSONNEL, INCLUDING ON SITE INTERVENTION.

	BASIC	CONFORT	GOLD	PREMIUM
CALL CENTER	●	●	●	●
REMOTE TECHNICAL ASSISTANCE	●	●	●	●
PREVENTIVE MAINTENANCE VISITS		●	●	●
CORRECTIVE MAINTENANCE		○	●	●
ON-SITE CORRECTIVE MAINTENANCE VISITS			●	●
48H SPARE DEPOT SERVICE		○	○	●
OBSOLESCENCE MANAGEMENT			○	●

## Obsolescence Management

Ensure life-time duration to your system

ACTIVATE OUR OBSOLESCENCE MANAGEMENT OPTION AND SAFRAN DATA SYSTEMS COMMITS TO:

- ▶ Replace the faulty equipment by more recent and of equivalent performance equipment
- ▶ Deliver and integrate the new equipment

## Local Spare Depot Service

Get rid of time constraints

SAFRAN DATA SYSTEMS CAN STORE SPARE PARTS THROUGHOUT THE WORLD, MAKING THE REQUIRED PRODUCT AVAILABLE CUSTOMS CLEARED IN THE NEXT 2 WORKING DAYS.

As soon as a faulty equipment is returned for repair and repaired, a swap of the equipment shall be done to keep operational availability and consistency vis-à-vis customs.

## Antenna Refurbishment

Offer your equipment a second life

SAFRAN DATA SYSTEMS IS ADDRESSING THE EARTH OBSERVATION REFURBISHMENT MARKET FOR THE PAST 10 YEARS, WHATEVER ANTENNA BRANDS.

Cost-effective, our solutions enable renewing multi-decade 4 to 13 m antennas, from antenna motion system to tracking receiver RF equipment including feed.

# AXS Series Specifications

	MODEL	AXS 370	AXS 550
	DIAMETER	3,7 m	5,5 m
	CONFIGURATION	Mono or bi-band X or S or S+X	
X-BAND RX [7,900 – 8,500 GHz]	G/T Mid-band, 5° elevation, clear sky, +20°C, continental	>27 dB/K	>30,5 dB/K
	Rx polarization	LHCP or RHCP (select at order): Opt. simultaneous Dual Polarization	
	Specific filtering	On-demand	
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 dB/K	>16 dB/K
	Rx polarization	LHCP or RHCP (select at order): Opt. simultaneous Dual Polarization	
	EIRP @ Psat	50 dBW Opt. 54 dBW	52 dBW Opt. 56 dBW
	Tx polarization	LHCP or RHCP (switchable)	
MODE OF OPERATIONS	Auto-track mode	Option Hexatrack	
ACCURACIES	Tracking accuracy	0,13°rms	0,10°rms
	Pointing accuracy	0,13°rms	0,10°rms
ENVIRONMENTAL CONDITIONS	Operating wind S/X-band	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	

# PRO Series Specifications

	MODEL	PRO 370	PRO 550	PRO 730	PRO 930	PRO 1100
	DIAMETER	3,7 m	5,5 m	7,3 m	9,3 m	11,0 m
	CONFIGURATION	S+Ka	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	N/A	>30,5 dB/K	>32,5 dB/K	>34,5 dB/K	>36 dB/K
	Rx Polarization		LHCP + RHCP			
	Specific Filtering		Included – Radar Low 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 dB/K	>16 dB/K	>19,5 dB/K	>21,5 dB/K	>22 dB/K
	Rx Polarization	LHCP and RHCP (simultaneous)				
	EIRP @ Psat	54 dBW	56 dBW	57 dBW Opt. 63 dBW	59 dBW Opt. 65 dBW	60,5 dBW Opt. 66, 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	>30,5 dB/K	>35 dB/K	>37 dB/K	>39 dB/K	>40 dB/K
	Rx Polarization	LHCP and RHCP (simultaneous)				
Mode of Operations	Auto-Track Mode	Single Channel Monopulse – Triband/Polarization switchable in each band (ZDS patented)				
Accuracies	Tracking Accuracy	0,03°rms	0,05°rms	0,035°rms	0,03°rms	0,02°rms
	Pointing Accuracy	0,10°rms	0,08°rms	0,08°rms	0,05°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
	Operating Wind Ka-Band	90 km/h gust	90 km/h gust	90 km/h gust	80 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				



**Safran Data Systems customers are the experts in the reception and use of state-of-the-art products for Earth Observation and Defense Applications. Challenging day-to-day operations require systems that are completely reliable and highest quality.**

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 industry.

With a large portfolio of full-motion antennas, a complete range RF equipment portfolio and the comprehensive Cortex series, Safran Data Systems provides you with affordable turnkey ground stations for any LEO operation including ground stations which can include Ka-band or be ready for future Ka-band implementation.

With dishes from 2.4 m to 11 m, our complete systems will manage your signals in S-X-Ka bands with dual polarization.

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 reliable satellite ground system operations.



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# POWERED BY TRUST

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