EARTH OBSERVATION
Ground Products & Services
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
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
### Antenna Portfolio

<table>
<thead>
<tr>
<th>MODEL</th>
<th>AXS 370</th>
<th>AXS 550</th>
<th>PRO 370</th>
<th>PRO 550</th>
<th>PRO 730</th>
<th>PRO 930</th>
<th>PRO 1100</th>
<th>MIL 240</th>
<th>MIL 550</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIAMETER</td>
<td>3.7 m</td>
<td>5.5 m</td>
<td>3.7 m</td>
<td>5.5 m</td>
<td>7.3 m</td>
<td>9.3 m</td>
<td>11 m</td>
<td>2.4 m</td>
<td>5.5 m</td>
</tr>
<tr>
<td>CONFIGURATION</td>
<td>S or X</td>
<td>S or X</td>
<td>S or X</td>
<td>K</td>
<td>X or S/X or S/K</td>
<td>S or X or S/K</td>
<td>X or S/K</td>
<td>S or X</td>
<td>S or X</td>
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<tr>
<td>AUTOTRACK</td>
<td>Hexatrack</td>
<td>Monopulse</td>
<td>Hexatrack</td>
<td>Monopulse</td>
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<td></td>
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</tr>
<tr>
<td>RADIO FREQUENCY</td>
<td>Single Polarization</td>
<td>Dual Polarization in option</td>
<td>Single Polarization</td>
<td>Dual Polarization in all bands</td>
<td>Dual Polarization in all bands</td>
<td>Dual Polarization in all bands</td>
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<tr>
<td>BASEBAND</td>
<td>Optional</td>
<td>Included</td>
<td>Included</td>
<td>Included</td>
<td>Included</td>
<td>Included</td>
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<tr>
<td>MONITORING &amp; CONTROL</td>
<td>Antenna level/System level in option</td>
<td>System level</td>
<td>System level</td>
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</tbody>
</table>

**AXS SERIES**

- AXS 370: 3.7 m
- AXS 550: 5.5 m

**PRO SERIES**

- PRO 370: 3.7 m
- PRO 550: 5.5 m
- PRO 730: 7.3 m
- PRO 930: 9.3 m
- PRO 1100: 11 m

**MIL SERIES**

- MIL 240: 2.4 m
- MIL 550: 5.5 m
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

HIGH DATA RATE RECEIVER
Cortex HDR
THE FUTURE, OFF-THE-SHELF
1. X, Ka and wider bands risk free reception
2. 10 Gbps, market fastest demodulator
3. 3 versions: Run, Sprint & Bolt

THE COMBO-BOX EQUIPMENT
SATCORE
LEAN OPERATIONS
1. Payload receiver & TT&C modem in 1 box
2. Plug-and-Play
3. Multi-mission preloaded

COMMAND RANGING & TELEMETRY
Cortex CRT
THE WORLD TT&C STANDARD
1. Safe & continuous for more than 20 years
2. Reference equipment for all satellites
3. Ready for future standards

FREQUENCY CONVERTERS AND SSPA
UTMOST PERFORMANCES
1. Ka, X and S band
2. 100% in-house
3. Designed for easy interfacing with Cortex Series

DIGITAL TRACKING RECEIVER
Cortex DTR
Cortex Centric
1. Multi-channel monopulse tracking
2. Cortex ICD
3. Comprises Safran Data Systems ACU

MONITORING AND CONTROL SOFTWARE
MCS
USER FRIENDLY GUI
1. Multi-mission and conflict management
2. Configure and monitor your whole ground station
3. Pass reports and analysis

SAFRAN DATA SYSTEMS EARTH OBSERVATION

Heron Island, Australia; © Airbus DS 2012
YOU ARE AT THE FRONT, WE ARE AT YOUR SIDE

Customer Support
Constant operations at lean expenses

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

<table>
<thead>
<tr>
<th>Service</th>
<th>Basic</th>
<th>Comfort</th>
<th>Gold</th>
<th>Premium</th>
</tr>
</thead>
<tbody>
<tr>
<td>Call Center</td>
<td></td>
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<tr>
<td>Remote Technical Assistance</td>
<td></td>
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<tr>
<td>Preventive Maintenance Visits</td>
<td></td>
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<tr>
<td>Corrective Maintenance</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On-Site Corrective Maintenance Visits</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>48H Spare Depot Service</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Obsolescence Management</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Obsolescence Management
Ensure life-time duration to your system

ACTIVATE OUR OBSOLESCENCE MANAGEMENT OPTION AND SAFRAN DATA SYSTEMS COMMITS TO:
1. Replace the faulty equipment by more recent and of equivalent performance equipment
2. 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

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<thead>
<tr>
<th>MODEL</th>
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</table>

### X-BAND

<table>
<thead>
<tr>
<th>Model</th>
<th>Configuration</th>
<th>RX</th>
<th>TX</th>
<th>G/T</th>
<th>Rx Polarization</th>
<th>Specific Filtering</th>
<th>Mode of Operation</th>
</tr>
</thead>
<tbody>
<tr>
<td>RX (7,000 – 8,500 GHz)</td>
<td>Mono or Bi-band X or S or S+X</td>
<td>7.9 GHz to 8.5 GHz</td>
<td>&lt;37 dB</td>
<td>LHCP or RHCP (user defined)</td>
<td>On-demand</td>
<td>Auto-track mode</td>
<td></td>
</tr>
<tr>
<td>RX (3.3 GHz – 5.4 GHz)</td>
<td>Mono or Bi-band X or S or S+X</td>
<td>8.1 GHz</td>
<td>&gt;36.5 dB</td>
<td>LHCP or RHCP</td>
<td>Specific Filtering</td>
<td>Auto-track mode</td>
<td></td>
</tr>
</tbody>
</table>

### S-BAND

<table>
<thead>
<tr>
<th>Model</th>
<th>Configuration</th>
<th>RX</th>
<th>TX</th>
<th>G/T</th>
<th>Rx Polarization</th>
<th>Specific Filtering</th>
<th>Mode of Operation</th>
</tr>
</thead>
<tbody>
<tr>
<td>RX (2.2 GHz – 2.3 GHz)</td>
<td>Mono or Bi-band X or S or S+X</td>
<td>2.2 GHz to 2.3 GHz</td>
<td>&lt;35 dB</td>
<td>LHCP or RHCP</td>
<td>On-demand</td>
<td>Auto-track mode</td>
<td></td>
</tr>
<tr>
<td>RX (2.0 GHz – 2.1 GHz)</td>
<td>Mono or Bi-band X or S or S+X</td>
<td>2.1 GHz</td>
<td>&gt;32.5 dB</td>
<td>LHCP or RHCP</td>
<td>Specific Filtering</td>
<td>Auto-track mode</td>
<td></td>
</tr>
</tbody>
</table>

### Environmental Conditions

- Operating Temperature: -40°C to +50°C with available options: winter package, deicing, radome

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## PRO Series Specifications

<table>
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<tr>
<th>MODEL</th>
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<th>TX</th>
<th>G/T</th>
<th>Rx Polarization</th>
<th>Specific Filtering</th>
<th>Mode of Operation</th>
</tr>
</thead>
<tbody>
<tr>
<td>RX (7,900 – 8,300 GHz)</td>
<td>Mono or Bi-band X or S or S+X</td>
<td>8.0 GHz to 8.3 GHz</td>
<td>&lt;38.5 dB</td>
<td>LHCP or RHCP (user defined)</td>
<td>Specific Filtering</td>
<td>Auto-track mode</td>
<td></td>
</tr>
<tr>
<td>RX (3.5 GHz – 3.9 GHz)</td>
<td>Mono or Bi-band X or S or S+X</td>
<td>3.6 GHz</td>
<td>&gt;35.5 dB</td>
<td>LHCP or RHCP</td>
<td>Specific Filtering</td>
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### S-BAND

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<tr>
<td>RX (2.2 GHz – 2.3 GHz)</td>
<td>Mono or Bi-band X or S or S+X</td>
<td>2.2 GHz to 2.3 GHz</td>
<td>&lt;30.75 dB</td>
<td>LHCP or RHCP</td>
<td>Specific Filtering</td>
<td>Auto-track mode</td>
<td></td>
</tr>
<tr>
<td>RX (2.1 GHz – 2.1 GHz)</td>
<td>Mono or Bi-band X or S or S+X</td>
<td>2.1 GHz</td>
<td>&gt;33 dB</td>
<td>LHCP or RHCP</td>
<td>Specific Filtering</td>
<td>Auto-track mode</td>
<td></td>
</tr>
</tbody>
</table>

### Mode of Operation

- Auto-Track Mode
- Single Channel Monopulse – Tri-band/Polarization switchable in each band (ZDS patented)

### Accuracies

- Tracking Accuracy: 0.13° rms, 0.10° rms
- Pointing Accuracy: 0.13° rms, 0.10° rms

### Environmental Conditions

- Operating Wind: 90 km/h gust in X-band, 110 km/h gust in Ka-band
- Operating Weather: 90 km/h gust in X-band, 110 km/h gust in Ka-band
- Operating Temperature: -40°C to +50°C with available options: winter package, deicing, radome