



# VISION Series

**Earth observation  
S/X/Ka Tri-band antenna**



## SATELLITE TRACKING SOLUTIONS

The VISION is the ultimate Satellite Tracking antennas designed by Safran Data Systems for Earth Observation. It is proposed either as a commodity or as a turnkey solution to support any Remote Sensing satellite.

As with all Safran Data Systems antennas, the VISION benefits from the unique S/X/Ka concentric patented feed offering a unique asset for Continuity of Operations satellite generation.

It is offered in 3 versions, from 5.5 m, 6.1 m to 7.3 m (under radome) to better serve users needs of G/T & EIRP no matter the environmental constraints.

The VISION antenna architecture is based on RF over fiber converters for any configuration to optimize performance and simplify antenna installation.

The VISION antenna is also designed to comply with demanding Ka-band, with a specific focus on pointing accuracy.

The Ka-band operations is the largest Ka-band antenna available on the market complying with Program Track operations at 26 GHz.



**Earth  
Observation  
Satellites**



**Service  
Providers**



**Scientific  
Missions**

### DESIGNED FOR EARTH OBSERVATION

Commercial Direct Receiving Station or Military applications

### UP TO TRI-BAND S/X/KA

For Continuity of Operations

### RF OVER OPTIC CONVERSION

Easy deployment & operation start-up

### AUTOTRACK OR PROGRAM TRACK IN ALL BANDS

Largest Ka-band program track antenna

### E-ANTENNA

Perfect match with NuRoN Virtualized baseband

**THE FUTURE, OFF-THE-SHELF**

# VISION Series

|                                                                   | MODEL                 | VISION 550                                                                              | VISION 610                                  | VISION 730                                  |
|-------------------------------------------------------------------|-----------------------|-----------------------------------------------------------------------------------------|---------------------------------------------|---------------------------------------------|
|                                                                   | DIAMETER              | 5.5m                                                                                    | 6.1m                                        | 7.3m                                        |
|                                                                   | CONFIGURATION         | Up to S+X+Ka                                                                            |                                             |                                             |
| <b>S-Band</b><br>Rx [2.200 – 2.300 GHz]<br>Tx [2.025 – 2.120 GHz] | G/T @10°EL            | >17.5 dB/K                                                                              | >18.5 dB/K                                  | >19.5 dB/K                                  |
|                                                                   | Rx Polarization       | LHCP and RHCP (Simultaneous)                                                            |                                             |                                             |
|                                                                   | EIRP @ Psat           | Up to 58 dBW                                                                            | Up to 59 dBW                                | Up to 60 dBW                                |
|                                                                   | Tx Polarization       | LHCP or RHCP (Switchable)                                                               |                                             |                                             |
| <b>X-Band</b><br>Rx [7.900 – 8.500 GHz]                           | G/T @10°EL            | >31 dB/K (bi-band)<br>>29.5 dB/K (tri-band)                                             | >32 dB/K (bi-band)<br>>30.5 dB/K (tri-band) | >33.5 dB/K (bi-band)<br>>32 dB/K (tri-band) |
|                                                                   | Rx Polarization       | LHCP and RHCP (Simultaneous)                                                            |                                             |                                             |
|                                                                   | Specific Filtering    | On-Demand. SAR LBF or BPF                                                               |                                             |                                             |
| <b>Ka-Band</b><br>Rx [25.500 – 27.000 GHz]                        | G/T @10°EL            | >35.7 dB/K                                                                              | >36.7 dB/K                                  | >38.2 dB/K                                  |
|                                                                   | Rx Polarization       | LHCP and RHCP (Simultaneous)                                                            |                                             |                                             |
|                                                                   | Specific Filtering    | On-Demand. BPF                                                                          |                                             |                                             |
| <b>Operational Modes</b>                                          | Tracking modes        | Program Track - Option Autotrack S-band, X-band and/or Ka-band                          |                                             |                                             |
| <b>Accuracy</b>                                                   | Pointing Accuracy     | < 80 m° peak (3 sigma) / < 45 m° rms (1 sigma)                                          |                                             |                                             |
|                                                                   | Tracking Accuracy     | < 50 m° peak (3 sigma) / < 25 m° rms (1 sigma)                                          |                                             |                                             |
| <b>Environmental Conditions</b>                                   | Operating Wind        | 110km/h (69 mph)                                                                        | 80km/h (50 mph)                             | 240km/h (radome)                            |
|                                                                   | Survival Wind         | 200km/h                                                                                 | 200km/h                                     | 240km/h (radome)                            |
|                                                                   | Operating Temperature | Nominal: -20°C / +45°C<br>Polar option : -45°C / +45°C - Tropical option: -20°C / +55°C |                                             |                                             |

## PEDESTAL SPECIFICATIONS

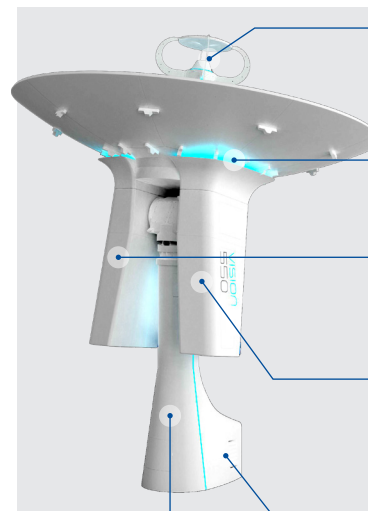
### Tracking any satellite from 400km (250 miles) altitude

Azimuth & Travel Range.....360° continuous  
 Elevation Travel Range.....0°-90°  
 Angular Velocity.....8°/s Az – 4°/s El & Train  
 Angular Acceleration.....10°/s<sup>2</sup> Az/El

## SMART OPTIONS

### Deployable with less than 2 days of operational downtime of antenna

Autotrack Single Channel Monopulse  
 Baseband Cortex, Satcore or NuRoN  
 Maestro-SAT M&C



#### Tri-band concentric feed

- Up to S + X + Ka
- Tracking in all bands is an option
- All designed to be aligned
- Unmatched RF performances

#### Ka-band ready

- 0.5mm typical rms

#### RF and F0 cabinet

- Space for 12U (Freq. converters,...)
- RF over fiber conversion
- E-Antenna ready (embedded digitizers)

#### HPAs cabinet

- Baseline: one 80W HPA
- Additional space for HPA redundancy, Test Loop Translator...
- 2 meters from Feed access

#### Precise & high speed Pedestal

- 3-axis Az/El + Train – No keyhole
- 0.045° rms pointing accuracy
- Limited number of parts
- Quick access to CORE elements

#### Electrical cabinets

- Compact design, close to servo-motors
- LEAN design and easily accessible

#### GLOBAL SALES

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