

LEGION 400

**Ka - SATCOM
LEO Gateway / TT&C
Tracking antenna**



SATELLITE TRACKING SOLUTIONS

The LEGION 400 is the new generation of small antenna system released by Safran Data Systems. Thanks to its unique feed, combined with a lean and ultra accurate pedestal both designed specially for Ka and upper bands, it enable long-term operations at a cost effective unit price.

LEGION 400 brings great value to Constellations project, where the needed number of ground station antennas is high. Also available in autotrack version with monopulse feed for LEOP/TT&C, Safran Data Systems offers his customer to build a highly flexible and scalable ground segment, with unmatched tracking performance and operational reliability.

The LEGION 400 is designed for deployment & operations in **any harsh environment, regardless temperature, wind, rain or snow.**

With the LEGION 400, Safran Data Systems offers a true one-stop-shop for the complete system, from the antenna to the baseband, including radomes, monitoring & control and scheduler.



Small Satellites



Service Providers (GSaaS)



Scientific & Commercial Satellites

DESIGNED FOR CONSTELLATIONS

Lean, Reliable with High Performance

SIMPLICITY AND RELIABILITY

Easy installation & operations
Feed embedded BUC,
with simple maintainability

UNIQUE COMPACT KA-BAND SATCOM FEED

High Performance and cost effective
Optional Monopulse tracking

LEAN, ROBUST, ULTRA ACCURATE

Our most cost effective Antenna for Telecom Gateway applications

RADOME COVERED

Maximum sustainability for any Environment
Protecting and extending lifetime

THE FUTURE, OFF-THE-SHELF

SATELLITE TRACKING SOLUTIONS

LEGION 400

MODEL	LEGION 400
DIAMETER	3.9 m (13 Ft)
CONFIGURATION	Ka Satcom
G/T @20°EL	≥ 30.5 dB/K
RF bands	Rx [17.7-20.2 GHz] or [20.2 -21.2 GHz] Tx [27.5-30 GHz] or [30-31 GHz]
Rx Polarization	LHCP and RHCP (Simultaneous)
Tx Polarization	LHCP and RHCP (Simultaneous)
EIRP	≥ 74.5 dBW @ 4dB OBO (60W). Option Alternative EIRP
Axial Ratio	≤ 0.5 dB
Operational Modes	Program Track. Option Monopulse Tracking
Pointing Accuracy	≤ 40 m° rms / ≤ 60 m° peak (3 sigma)
Monopulse Tracking	≤ 40 m° peak (3 sigma)
Accuracy	≤ 10 rms
Operating / Survival Wind	200 km/h
Operating Temperature	Nominal: -20°C / +45°C Polar option : -50°C / +45°C Tropical option: -20°C / +55°C

PEDESTAL SPECIFICATIONS

Tracking Any Satellite from 350km (220 miles) altitude without Keyhole

Azimuth Travel Range	0° - 360°
Elevation travel Range	0° - 180° + X-El axis
Angular Velocity	20° / s Az/El
Angular Acceleration	5°/s ² Az/El

AVAILABLE OPTIONS

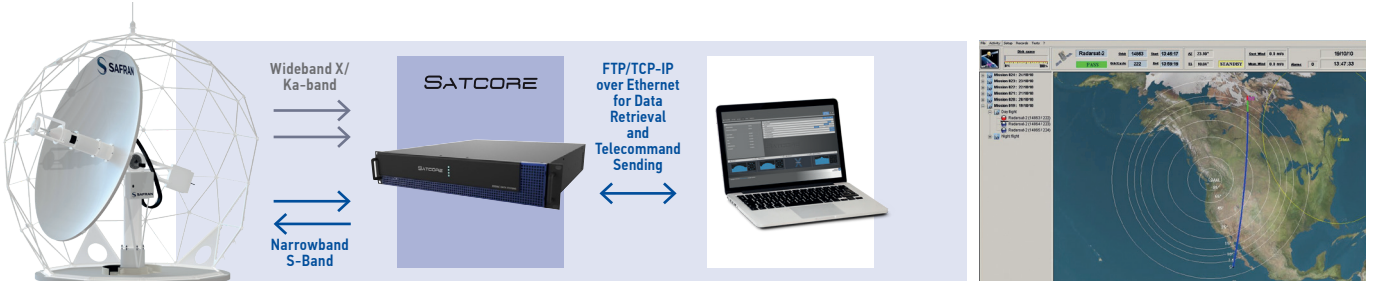
- ▶ Monopulse Autotrack
- ▶ SSPA
- ▶ Loop-Back Tests
- ▶ Satcore Baseband
- ▶ Maestro-SAT M&C

LEGION 400:

- Designed for LEO-Constellations
- Lean, robust, reliable and cost-effective
- State-of-the-art Ka-Band performance.
- Monopulse Tracking available

LEGION 400 S/X/Ka

- Auto-aligned Reflector**
 - 3,9m diameter
 - ≤0.4mm rms surface accuracy
 - Ka-band optimized
- Protecting Radome**
 - Metal space frame
 - Low transmission loss
 - Extend product lifetime
 - Ease antenna maintenance
- Precise & high speed Pedestal**
 - 3 axis Az/El + cross-El
 - ≤0.040° rms pointing accuracy
 - No keyhole
- Simple & lean**
 - Easy self- installation
 - Limited number of parts
 - Quick access to CORE elements
- Ka Satcomfeed**
 - 4-ports Rx / Tx
 - Dual optics « ring focus »
 - Dual polar BUC in feed
 - Monopulse Autotrack in option



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