

DATA SYSTEMS



SPARTE 500 L/S/C

Tracking Antennas
15ft (4.6m) / 18ft (5.5m)



TELEMETRY GROUND SOLUTIONS

SPARTE 500 series antenna, commonly mounted with a 5.5m reflector, is a field and time proven product delivered to customers for **mission-critical applications** where the telemetry reception is at stake.

Wherever telemetry tracking and reception matters, Safran Data Systems SPARTE 500 series antennas make the difference: **high performance, in-the-field upgrade-ability to C-band support, skid or trailer-mounted mobility, and even 3-axis shipborne versions.**

Widely used across world test ranges, the SPARTE 500 series antennas **meet the most demanding flight test profiles.** Its lean design and ease of operations make it a perfect match for **any ground test range**, as a complement to smaller range trackers.



Launch Vehicle Telemetry



Missile Testing



Fixed & Rotary Wing

BEST-IN-CLASS SERVO CONTROLS

Direct Drives, User Selectable Servo Algorithms

SCM 1000HZ SCAN RATE

Common SCM Design for Main & ACQ-AID Antenna

C-BAND FIELD UPGRADE-ABLE

Simple Add-On without any Structural Change

TIME PROVEN

Robust Pedestal in Operations at Test Sites for Decades

TRANSPORTABLE ADAPTATION KIT

Skid- or Trailer-Mounted Versions

SPARTE 500 L/S/C

SYSTEM SPECIFICATIONS

Pedestal

Azimuth Travel Range Unlimited
 Elevation Travel Range -5° / + 91°
 Angular Velocity 20°/s
 Angular Acceleration 20°/s²
 Motors Single Drive DC Brushless

Reflector

8 Panel Segmented Auto-Aligned Carbon Fiber

Servo-Control

Pointing Accuracy ≤ 0.1°
 Tracking Accuracy ≤ 0.1°
 Acceleration Lag 0.07°/s²

Antenna Control Unit

Manual, Slew, Scan, Slave (2 x Inputs), RF Tracking, Program-Track, GPS Slaving
Advanced Features: Autotracking (Automatic ACU Modes Management), Auto Acquisition (with Adjustable Signal Thresholds), Multipath Clipping, Phase & Slope Auto Calibration, ...
 Tracking Signal Inputs 4x Pairs of AM+AGC
 Auto-Diversity LHCP/RHCP, Best Telemetry Channel
Diagnostic Tool Continuous BIT, Servo-Control, Tracking, Y-Factor, Logbook, Parameters Recording

General Characteristics

Power 230 or 400 Vac 50-60Hz. 6.8kVA
 Antenna Weight 2600 kg (5700 lbs)

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature Range

Outdoor Equipment -4°F to 122°F (-20°C to +50°C)
 Indoor Equipment +5°F to +95°F (+10°C to +35°C)

Operational Wind

Mean ≤ 85 km/h
 Gust ≤ 100 km/h
 Survival Wind ≤ 200 km/h

Humidity

Outdoor 100 %
 Indoor 85 % Non-Condensing

OPTIONAL ITEMS

- ▶ INET
- ▶ Operator control desk
- ▶ Axial video camera for visual target aiming
- ▶ Reflector and feed de-icing system
- ▶ Cable wrap for special application (+/- 370°)
- ▶ Acquisition aid antenna
- ▶ Low gain switching for short range
- ▶ Single / Dual / Tri-band feed
- ▶ 3-axis pedestal version for shipborne operations
- ▶ Radome environment protection
- ▶ Trailer/Skid adaptation kit
- ▶ GPS time / position synchronization / North autocalibration
- ▶ Compatible with Zodiac Telemetry Mission Controller (TMC)
- ▶ Custom form factors on demand
- ▶ Extend temperature -30°C

	4.6 M / 15 FT	5.5 M / 18 FT
Tracking	8 Dipoles Monopulse	
Receive Frequency Range	1429 - 1545 MHz / 2200 - 2400 MHz / 4400 - 5250 MHz	
Receive Polarization	RHCP and LHCP	
Axial Ratio	≤ 1.5 dB on Axis	
-3dB Beamwidth @ 2.3GHz	2°	1.6°
G/T @2300 MHz, No Filter, 10° Elevation, 20°C Clear Sky	14.5 dB/K	16 dB/K
Maximum Wind for Nominal / Degraded Performance	100 / 120 km/h	85 / 100 km/h



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