

## 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°/s<sup>2</sup>  
 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°/s<sup>2</sup>

### 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



### GLOBAL SALES

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