

DATA SYSTEMS



SPARTE 700 L/S/C

Tracking Antennas
20ft (6.0m) / 24ft (7.3m)



TELEMETRY GROUND SOLUTIONS

The SPARTE 700 series antenna is a field and time proven product delivered to customers for **mission-critical applications** where the telemetry reception is at stake. Any flying target such as aircraft or space launching vehicles will be accurately tracked thanks to the high gain of this **large aperture antenna**.

The very robust and solid design of the SPARTE 700 series ensures the **best performance in any situation**: aluminum-alloy reflector for increased surface accuracy, SCM tracking feeds for reliable and accurate tracking, dual drive for motors redundancy and no-backlash...

And for the ever most demanding applications, the SPARTE 700 series also exists in **skid-mounted transportable and 3-axis gyro-stabilized versions**.



Launch Vehicle Telemetry



Missile Testing



Fixed & Rotary Wing

BEST-IN-CLASS SERVO CONTROLS

Direct Drives, Precise Reducers

SCM 1000 HZ SCAN RATE

Common SCM Design for Main & ACQ-AID Feed

C-BAND FIELD UPGRADE-ABLE

Simple Add-On without any Structural Change

DUAL DRIVE

Uninterrupted Operations, No Backlash

TRANSPORTABLE VERSION

Relocatable skid mounted version

SPARTE 700 L/S/C

> SYSTEM SPECIFICATIONS

Pedestal

Azimuth Travel Range ± 270°
 Elevation Travel Range 0° / + 90°
 Angular Velocity 10°/s Az, 10°/s El
 Angular Acceleration 10°/s²
 Motors 2 Motors/Axis (Dual Drive)
 Position Readouts 17 bits Encoders

Reflector

12 Panel Segmented Aluminum Alloy Reflector

Servo-Control

Pointing Accuracy ≤ 0.08° rms
 Tracking Accuracy ≤ 0.05°
 Acceleration Lag 0.2°/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, Centralized Remote Control for Receivers, Recorders, ...

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. 30kVA
 Antenna Weight 11,000 kg (24,250 lbs)

> ENVIRONMENTAL SPECIFICATIONS

Operating Temperature Range

Outdoor Equipment -13°F to 122°F (-25°C to +50°C)
 Indoor Equipment 50°F to 95°F (+10°C to +35°C)

Operational Wind

Mean ≤ 90 km/h
 Gust ≤ 110 km/h
 Survival Wind ≤ 200 km/h

Humidity

Outdoor 100 %
 Indoor 85 % Non-Condensing

> OPTIONAL ITEMS

- ▶ INET
- ▶ Operator control desk
- ▶ Reflector and feed de-icing system
- ▶ Rotary joint for unlimited azimuth travel
- ▶ Axial video camera for visual target aiming
- ▶ 3rd channel and embeded test dipole
- ▶ Low gain switching for short range
- ▶ Single / Dual / Tri-band feed
- ▶ 100W and 1000W S-Band Tx (+Rx) feed
- ▶ 3-axis pedestal version for shipborne operations
- ▶ Skid-mounted relocatable version
- ▶ Radome environment protection
- ▶ Extended Elevation travel range -5+92°
- ▶ Extended temperature -40°C

| | 6.0m / 20 FT | 7.3m / 24 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 | 1,5° | 1,24° |
| G/T @2300 MHz, No Filter, 10° Elevation, 20°C Clear Sky | 16.3 dB/K | 18 dB/K |
| Maximum Wind for Nominal / Degraded Performance | 100 / 120 km/h | 90 / 110 km/h |



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