

1822 Celero

1.8 Meter Flyaway Antenna



- *Intelsat Compliant*
- *Multi-Band C, X, Ku band Frequencies*
- *Multiple Integration Options*
- *Compact Packaging*
- *Superior Stability in Wind*
- *Excellent Reliability*
- *Minimal Maintenance*
- *Less than 15 min Assembly Time*
- *Captive Hardware*

The Sat-Lite Technologies Model 1822 Celero flyaway antenna offers excellent performance in a lightweight, high value and portable package. This antenna features a 2 or 4 piece segmented reflector designed to provide excellent gain characteristics. The custom-designed elevation-over-azimuth tripod pedestal provides high stiffness with minimal assembly time. The antenna design is modular which reduces the number of pieces required for assembly. This also results in an improved packaging scheme requiring less time and effort to pack or unpack the antenna. Cases are included.

The antenna is designed to meet international performance specifications for commercial or military applications and is readily available in C, X, and Ku band frequencies. Multiple feed configurations are available.



| Electrical Specifications | 2 Port Cross-Pol C Band Linear Feed | | 2 Port Cross-Pol C Band Circular Feed | | 2 Port X Band Circular | | 2 Port Cross Pol Ku Band Linear | |
|----------------------------------|--|--------------|--|--------------|-------------------------------|-------------|--|--------------|
| | Rx | Tx | Rx | Tx | Rx | Tx | Rx | Tx |
| Frequency (GHz) | 3.40 - 4.20 | 5.85 - 6.725 | 3.625 - 4.20 | 5.85 - 6.425 | 7.25 - 7.75 | 7.9 - 8.4 | 10.70 - 12.75 | 13.75 - 14.5 |
| Gain (Midband, dBi) | 35.4 | 39.3 | 35.4 | 39.5 | 41.3 | 42.0 | 45.3 | 46.6 |
| Noise Temperature (°K) | | | | | | | | |
| 10 deg El | 41 | | 41 | | 60 | | 55 | |
| 20 deg El | 36 | | 36 | | 56 | | 50 | |
| Axial Ratio | | | 3.0 dB | 2.3 dB | 1.5 dB | 1.5 dB | | |
| Cross Pol | | | | | | | | |
| On Axis | -30 dB | -30 dB | -15.3 dB | -17.5 dB | -21.3 dB | -21.3 dB | -30 dB | -30 dB |
| in 1 dB BW | -23 dB | -23 dB | -15.3 dB | -17.5 dB | -21.3 dB | -21.3 dB | -23 dB | -23 dB |
| Sidelobe Compliances | IESS 207 | | IESS 207 | | Meets DSCS | | Meets ITU 580 | |
| VSWR | 1.50:1 | 1.30:1 | 1.50:1 | 1.30:1 | 1.30:1 | 1.30:1 | 1.50:1 | 1.30:1 |
| Isolation | | | | | | | | |
| Tx/Rx | -60 dB | 0 dBm input | -60 dB | 0 dBm input | -110 dB | 0 dBm input | -110 dB | 0 dBm input |
| Rx/Tx | 0 dBm input | -60 dB | 0 dBm input | -60 dB | 0 dBm input | -110 dB | 0 dBm input | -35 dB |

| Mechanical / Environmental Specifications | |
|---|--|
| Reflector | 1.8 meters (70.87 in) Glass Fiber Reinforced Polyester |
| Reflector Configuration | Parabolic Single Offset, 0.6 F/D (2 piece or 4 piece option) |
| Antenna Travel | |
| Azimuth | ± 35° continuous fine adjustment (360° coarse) |
| Elevation | 0 - 90° of reflector bore sight |
| Polarization | ± 90° |
| Antenna Packaging | |
| Case 1 - Pedestal / Backbeam Case | 1 @ 34" x 29" x 17 3/4" / 83 lbs (37.7 kg) |
| Case 2 - Boom / Legs Case | 1 @ 49" x 22" x 11 1/2" / 86 lbs (39 kg) |
| Case 3 (2 piece reflector) | 1 @ 44" x 80" x 18" / 200 lbs (91 kg) |
| Case 3 & 4 - (4 piece reflector) - <i>Optional</i> | 2 @ 39" x 41" x 13 1/2" / 102 lbs ea (46.4 kg) |
| Total Weight (less feed options) - 4 PC Refl Config | 373 lbs (169 kg) |
| Total Antenna Weight (less feed options)* | 177 lbs (80.5 kg) |
| Temperature | |
| Operational | -40 to 60°C (-40 to 140°F) |
| Survival | -50 to 70°C (-58 to 158°F) |
| Pointing Loss (operational winds)** | 3dB peak (Ku-band Rx) |
| Winds | |
| Operational | Up to 25 mph (45 kph) with no ballast or anchors 30 Gusting to 45 mph (40 kph G 72 kph) with ballast or anchors |
| Survival | 60 mph (96 kph) with tie downs / any position |
| Feedboom Mounted Integration*** | 25 lbs (11.4 kg) |
| Rain | |
| Operational | 2 in/h (5 cm/h) |
| Survival | 4 in/h (10 cm/h) |
| Relative Humidity | 0 - 100% (condensing) |
| Solar Radiation | 360 btu/h/ft ² (1000 Kcal/h/m ²) |
| Radial Ice (survival) | 1/2 in (12.7 mm) |
| Corrosive Atmosphere | As encountered in coastal and/or industrial areas |

850-0006-E

Note: Specifications subject to change without notice

* Feed packaged separately dependent on options ordered
 ** Performance dependent on proper installation and ballast/anchors
 *** Dependent on position of weight. Consult Engineering for details