

# 1822 Celero

## 1.8 Meter Flyaway Antenna

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- *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.



# TECHNICAL SPECIFICATIONS



<i>Electrical Specifications</i>	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

<i>Mechanical / Environmental Specifications</i>	
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" / 67 lbs (30.5 kg)
Case 2 - Boom / Legs Case	1 @ 49" x 22" x 11 1/2" / 63 lbs (28.6 kg)
Case 3 (2 piece reflector)	1 @ 44" x 80" x 18" / 187 lbs (85 kg)
Case 3 & 4 - (4 piece reflector) - <i>Optional</i>	2 @ 39" x 41" x 13 1/2" / 81 lbs ea (36.8 kg)
Total Weight (less feed options) - 4 PC Refl Config	291 lbs (132.4 kg)
Total Antenna Weight (less feed options)*	134 lbs (61 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 <sup>2</sup> (1000 Kcal/h/m <sup>2</sup> )
Radial Ice (survival)	1/2 in (12.7 mm)
Corrosive Atmosphere	As encountered in coastal and/or industrial areas

Note: Specifications subject to change without notice

850-0006-D

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