

# 1221 AGILIS

## 1.2 Meter Carbon Fiber Flyaway Antenna



- **Intelsat and Eutelsat Compliant**
- **Multi-Band X, Ku or Ka band Capable**
- **4 Piece Segmented Carbon Fiber Reflector**
- **Compact Pedestal featuring easy point and peak control**
- **Ships in 2 or 3 Ruggedized Cases (Optional Packaging)**
- **High Gain / Low Cross Pol Design**
- **Superior Stability in Wind**
- **Multiple Integration Options**
- **Excellent Reliability**
- **Minimal Maintenance**

The Sat-Lite Technologies Model 1221 flyaway antenna is highly portable, compact, light-weight, and can be assembled by one person in less than 15 minutes. The antenna features a 4 piece segmented carbon fiber composite reflector designed to provide exceptional performance in a lightweight package. The elevation-over-azimuth pedestal provides excellent stiffness characteristics and convenience for the user when pointing and peaking on a satellite. The antenna packs in 3 ruggedized weatherproof shipping cases (with option for 2 cases using heavier pedestal case).

In addition, the antenna is designed to meet international performance specifications for commercial or military applications and is available in C, X, Ku and/or Ka band frequencies. Multiple feed configurations and paint schemes are readily available.



# TECHNICAL SPECIFICATIONS



<i>Electrical Specifications</i>	2 Port C Band (Insat)		2 Port X Band		2 Port Cross Pol Ku Band		2 Port Cross Pol Ku Band		2 Port Cross Pol Ka Band	
	Linear Feed		Circular		Linear / Standard Feed		Linear / Mode Matched Feed		Circular Polarization	
	Rx	Tx	Rx	Tx	Rx	Tx	Rx	Tx	Rx	Tx
Frequency (GHz)	4.5 - 4.8	6.725 - 7.025	7.25 - 7.75	7.9 - 8.4	10.70 - 12.75	13.75 - 14.5	10.7 - 12.75	13.75 - 14.5	20.2 - 21.2	30.0 - 31.0
Gain (Midband, dBi)	33.6	37.1	37.6	38.2	42.2	43.6	42.2	43.6	46.4	49.7
Noise Temperature (K)										
10 deg El	48		77		65		66		160	
20 deg El	42		61		55		58		125	
Axial Ratio			1.5 dB	1.5 dB					1.5 dB	1.0 dB
Cross Pol										
On Axis	-30 dB	-30 dB	-21.3 dB	-21.3 dB	-35 dB	-35 dB	-35 dB	-35 dB	-21.3 dB	-24.8 dB
in 1 dB BW	-26 dB	-26 dB	-21.3 dB	-21.3 dB	-27 dB	-27 dB	-25 dB	-35 dB	-21.3 dB	-24.8 dB
Sidelobe Compliances		Meets ITU 580		Meets DSCS		Meets ITU 580 FCC		Eutelsat ITU 580		Meets ITU 580
VSWR	1.30:1	1.30:1	1.30:1	1.30:1	1.35:1	1.30:1	1.50:1	1.35:1	1.35:1	1.30:1
Isolation										
Tx/Rx	-70 dB	0 dB input	-110 dB	0 dB input	-85 dB	0 dB input	-85 dB	0 dBm input	-85 dB	0 dB input
Rx/Tx	0 dB input	-30 dB	0 dB input	-110 dB	0 dB input	-30 dB	0 dB input	-30 dB	0 dB input	-30 dB

<i>Mechanical / Environmental Specifications</i>	
Reflector	1.2 meters (47.2 in) Carbon Fiber Reinforced Polymer
Reflector Configuration	4 Piece Segmented Carbon Fiber Single Offset
Antenna Travel	
Azimuth	360° continuous
Elevation	5 - 90° of reflector bore sight
Polarization	± 90°
Packaging (3 Cases)	
AZ Hub, EL Jack, Feed	31.5" x 20.5" x 13.7" (51 lbs)
Backbeam, Legs, Boom	31.5" x 20.5" x 13.7" (62 lbs)
Reflector Case	30" x 30" x 15.25" (65 lbs)
Additional Packaging Options Available Including Integrated BUC	
Temperature	
Operational	-30 to 60°C (-22 - 140°F)
Survival	-40 to 70°C (-40 - 158°F)
Winds	
Operational	30 mph Gusting to 45 mph ( 48 kph G 72 kph)
Survival	60 mph (96 kph) with tie downs / any position
Integration	
Feedboom Mounted <sup>1</sup>	35 lbs
Rain	
Operational	4 in/h (10 cm/h)
Survival	6 in/h (15 cm/h)
Relative Humidity	0 - 100%
Solar Radiation	360 btu/h/ft <sup>2</sup> (1000 Kcal/h/m <sup>2</sup> )
Radial Ice (survival)	1 in (25.4 mm)
Corrosive Atmosphere	As encountered in coastal and/or industrial areas

<sup>1</sup> Dependent on mounting position relative to elevation axis  
 Note: Specifications subject to change without notice

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