

2421 Agilis

2.4 Meter Carbon Fiber Flyaway Antenna



- *Intelsat / Eutelsat Compliant (with Appropriate Feed)*
- *Multi-Band C, X, Ku, and Ka band Frequencies*
- *Integrated Feedboom*
- *Compact Packaging*
- *Superior Stability in Wind*
- *Excellent Reliability*
- *Minimal Maintenance*
- *Less than 15 min Assembly Time*
- *Captive Hardware*

The Sat-Lite Technologies Model 2421 Agilis Carbon Fiber Flyaway Antenna offers superior performance in a lightweight, portable package. This antenna features a 9 piece carbon fiber segmented reflector designed to provide high gain and low cross pol characteristics. The standard antenna is designed for extremely rugged use and packs 6 high performance all weather cases. Optional package configurations are available. The tripod features a user friendly interface to allow for easy positioning and peaking on a satellite. In addition, the antenna components are modular in design which provide simple options for motorization and tracking requirements. The antenna can be assembled by a single person in 15 minutes or less.

The antenna is designed to meet international performance specifications for commercial / off-the-shelf applications and is readily available in C, X, Ku, and Ka band frequencies. Multiple integration packages are available with a quick change / quick pack configuration of the feedboom. The integrated boom assembly with BUC and LNB packs in a single case for easy and quick installation or packing.



<i>Electrical Specifications</i>	2 Port Cross-Pol C Band Extended Linear Feed		2 Port Cross-Pol C Band Low Axial Ratio Circular		2 Port X Band Low Axial Ratio Circular		2 Port Cross-Pol Ku Band Linear / Mode Matched Feed		2 Port Ka Band Circular Polarization	
	Rx	Tx	Rx	Tx	Rx	Tx	Rx	Tx	Rx	Tx
Frequency (GHz)	3.4 - 4.2	5.85 - 6.725	3.625 - 4.2	5.85 - 6.425	7.25-7.75	7.9-8.4	10.95 - 12.75	13.75 - 14.5	20.2 - 21.2	30 - 31
Gain (midband, dBi)	37.6	41.8	37.9	42.0	43.2	43.8	47.1	49.1	51.7	54.9
Noise Temperature (°K)										
10 deg El	48		53		78		64		130	
20 deg El	44		50		74		60		110	
40 deg El	33		47		69		56		99	
Typical G/T (20 deg El)										
35 deg LNA	18.4 db/°K		18.2 db/°K							
55 deg LNA					22.1 db/°K					
70 deg LNA							25.8 db/°K			
120 deg LNA									28.3 db/°K	
Cross Pol										
On Axis	-30 dB	-30 dB	-20 dB	-27 dB	-30 dB	-30 dB	-35 dB	-35 dB	-21.3 dB	-24.8 dB
in 1 dB BW	-28 dB	-28 dB	-20 dB	-27 dB	-30 dB	-30 dB	-25 dB	-35 dB	-21.3 dB	-24.8 dB
Axial Ratio			1.6 dB	0.75 dB	0.5 dB	0.5 dB			< 1.5 dB	< 1.0 dB
Sidlobe Compliances	Meets ITU 580 Beyond Mainbeam		Meets ITU 580 Beyond Mainbeam		Meets DSCS		Meets ITU, FCC 25.209, Eutelsat		Meets DSCS	
VSWR	1.40:1	1.30:1	1.35:1	1.30:1	1.30:1	1.30:1	1.4:1	1.30:1	1.30:1	1.30:1
Isolation										
Tx/Rx	-85 dB	0 dBm input	-85 dB	0 dBm input	-110 dB	0 dBm input	-85 dB	0 dBm input	-85 dB	0 dBm input
Rx/Tx	0 dBm input	-30 dB	0 dBm input	-30 dB	0 dBm input	-110 dB	0 dBm input	-35 dB	0 dBm input	-70 dB
Max Power Handling (Continuous)		1.0 kW		1.0 kW		1.0 kW		1.0 kW		200 W
WG Interface	CPR-229	CPRG-137	CPR-229	CPRG-137	WR112 UBR84	WR112 UBR84	WR75-Cover	WR75-Cover	WR42	WR28

<i>Mechanical / Environmental Specifications</i>	
Reflector	2.4 meters (96 in) Carbon Fiber
Reflector Configuration	Parabolic Single Offset, 0.8 F/D (9 piece)
Antenna Travel	
Azimuth	360° with fine adjustment
Elevation	5 - 90° of reflector bore sight
Polarization	± 90°
Antenna Packaging (Std 6 Cases, Option - 4 Cases, 2 Man Lift)	
Pedestal Cases (3), Compression Molded / Wheels / Handles	57 Kg (125 lbs) Typical Per Case
Reflector Cases (3), Rotomolded With Wheels / Handles	36 Kg (80 lbs) Typical Per Case
Integrated Feed and Boom Pacakges with Amps	Per Band or Per Feed
Temperature	
Operational	-30 to 60°C (-22 to 140°F)
Survival	-40 to 70°C (-40 to 158°F)
Pointing Loss (operational winds)	2 dB peak (Ku-band Rx)
Winds	
Operational	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	85 lbs (38.6 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

Performance dependent on proper installation and ballast/anchors
 Feedboom Mounted Integration Dependent on position of weight
 Note: Specifications subject to change without notice

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