1821 Agilis

1.8 Meter Carbon Fiber Flyaway Antenna

- ***Intelsat & Eutelsat Compliant***
- ***Multi-Band C, X, Ku, DBS and Ka Band Frequencies***
- ***Integrated Feedboom Assembly Option***
- ***Compact Packaging***
- ***Superior Stability in Wind***
- ***Excellent Reliability***
- ***Minimal Maintenance***
- ***Less than 15 min Assembly Time***

The Sat-Lite Technologies Model 1821 Agilis carbon fiber flyaway antenna offers superior performance in a lightweight, portable package. This antenna features a 7 piece carbon fiber segmented reflector designed to provide high gain and low cross pol characteristics. The custom-designed elevation-over-azimuth tripod pedestal provides high stiffness with minimal weight. The antenna components are modular in design which provides options for motorization and tracking requirements. High performance molded cases are included.

The antenna is designed to meet international performance specifications for commercial or off-the-shelf military applications and is readily available in C, X, Ku, DBS and Ka band frequencies. Multiple feed and integration packages are available with a quick change / quick pack configuration The integrated boom assembly with BUC and LNB packs in a single case for quick installation. Integrated feedbooms can be supplied which will allow a quick change from one frequency band to another.

SAT-LITE technologies

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TECHNICAL SPECIFICATIONS

Electrical Specifications	2 Port Cross-Pol C Band Std. Linear Feed		2 Port Cross-Pol C Band Circular Feed		2 Port X Band Circular Polarization		2 Port Cross-Pol Ku Band Linear / Mode Matched Feed		2 Port Cross-Pol DBS Band Linear Feed		2 Port Ka Band Circular Polarization	
	Rx	Tx	Rx	Tx	Rx	Tx	Rx	Tx	Rx	Tx	Rx	Tx
Frequency (GHz)	3 625 - 4 2	5.85 - 6.425	3.625 - 4.2	5.85 - 6.425	7 25 - 7.75	7.9 - 8.4	10 95 - 12.75	13.75 - 14 5	10.70 - 12.75	17.3 - 18.4	20.2 - 21.2	30 0 - 31.0
Gain (Midband, dBi)	35.6	39 8	35.4	39.7	41.3	42.0	45.0	47.1	44 8	48 5	49.6	53.0
Noise Temperature (°K)												
10 deg El	45		55		56		54		60		145	
20 deg El	40		50		52		48		54		125	
Cross Pol												
On Axis	-35 dB	-35 dB	-15.3 dB	-17.7 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	-15.3 dB	-17.7 dB	-21 3 dB	-21.3 dB	-25 dB	-35 dB	-27 dB	-27 dB	-21 3 dB	-24.8 dB
Axial Ratio			3 dB	2.3 dB	1.5 dB	1.5 dB					1.5 dB	1 dB
Sidelobe Compliances	Meets ITU 580 Beyond Mainbeam		Meets ITU 580 Beyond Mainbeam			Meets DSCS		Meets ITU, FCC 25 209, Eutelsat		Meets ITU		Meets ITU
VSWR	1 30:1	1 30:1	1.30:1	1 30:1	1 30:1	1.30:1	1.35:1	1 30:1	1 35:1	1.30:1	1 35:1	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	-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	-30 dB	0 dBm input	-30 dB	0 dBm input	-30 dB

Mechanical / Environmental Specifications	
Reflector	1.8 meters (70.87 in) Carbon Fiber
Reflector Configuration	Parabolic Single Offset, 0.8 F/D (7 pieces)
Antenna Travel	
Azimuth	360° continuous with fine adjust
Elevation	5 - 90° of reflector bore sight
Polarization	± 90°
Antenna Packaging	
Case 1 - Backbeam & Legs	44.9" x 25.3" x 16.5" (100 lbs)
Case 2 - Az Hub, El Strut, Foot Pads	37.5" x 27.5" x 14.5" (98 lbs)
Case 3 & 4 - (7 piece reflector)	42" x 13" x 34.5" (76 lbs ea.)
Total Weight (less feed options)	350 lbs (168 kg)
Temperature	
Operational	-30 to 60°C (-22 to 140°F)
Survival	-40 to 70°C (-48 to 158°F)
Pointing Loss (operational winds)**	2dB peak (Ku-band Rx)
Winds	
Operational	30 Gusting to 45 mph (40 kph G 72 kph) with ballast or anchors
Optional Wind Strut Accessory	45 mph (72 kph)
Survival	60 mph (96 kph) with tie downs / any position
Feedboom Mounted Integration***	60 lbs (27.2 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

850-0005-6

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

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