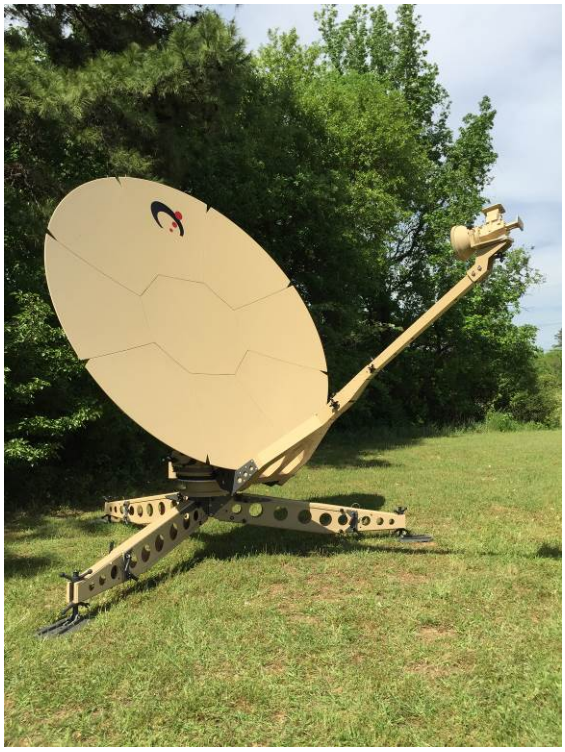
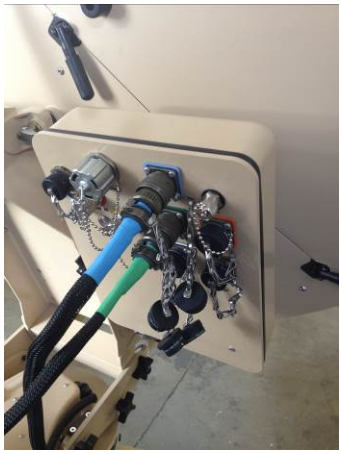
2431 Agilis

2.4 Meter Motorized Carbon Fiber Flyaway Antenna





- ***Intelsat / Eutelsat Compliant (with Appropriate Feed)***
- ***Multi-Band C, X, Ku, and Ka band Frequencies***
- ***Integrated Feedboom***
- ***Compact Packaging***
- ***Fully Integrated Control System***
- ***User Friendly GUI Interface Option***
- ***Autolocate Control with Tracking Options***
- ***Excellent Reliability with Minimal Maintenance***
- ***15 min Assembly Time***
- ***Captive Hardware***

The Sat-Lite Technologies Model 2431 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 plus an additional RF case for each band of operation. The control system offers autolocating and high performance tracking options for multiple bands. The motorized tripod features a user friendly interface to allow for easy positioning and peaking on a satellite. The antenna can be assembled by a trained person in 15 minutes.

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.

SAT-LITE technologies

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TECHNICAL SPECIFICATIONS

Electrical Specifications	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	43.0	43.7	47.1	49.1	51.7	54.9
Noise Temperature (K)										
10 deg El	48		53		78		64		160	
20 deg El	44		50		74		60		120	
40 deg El	33		47		69		56		105	
Typical G/T (20 deg El)										
35 deg LNA	18.4 db/K		18.2 db/K							
55 deg LNA					21.4 db/K					
70 deg LNA							25.7 db/K			
110 deg LNA									28 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
Sidelobe Compliances	Meets ITU 580 Beyond Mainbeam		Meets ITU 580 Beyond Mainbeam		Meets DSCS		Meets ITU, FCC 25.209, Eutelsat		Meets 188-164	
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

Mechanical / Environmental Specifications	
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 (6 Cases - Std + RF)	Packed Weight Including Cases
Pedestal Hub Case	68 Kg (150 lbs) 30 x 25 x 24 in
Pedestal Backbeam Case / Controller	65 Kg (140 lbs) 45 x 25 x 17 in
Pedestal Leg / El Jack Case	73 Kg (160 lbs) 45 x 25 x 17 in
Reflector Cases (3 as Std Config.)	36 Kg (80 lbs) Ea. - 39 x 36 x 12 in
Integrated Feed and Boom Packages with Room for Amps	Per Band - Typical 36 Kg (80 lbs) 45 x 25 x 17 in
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 Loss (with appropriate controller)
Winds	
Operational	30 Gusting to 45 mph (48 kph G 72 kph) with ballast or anchors
Survival	60 mph (96 kph) with tie downs / any position
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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