

# 1531 AGILIS

## 1.5 Meter Motorized Flyaway Antenna



The Sat-Lite Technologies Model 1531 motorized flyaway antenna is highly portable, compact, lightweight, 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 motorized elevation-over-azimuth pedestal provides excellent stiffness characteristics and convenience for the user when pointing and peaking on a satellite. The antenna and controller pack in 3 ruggedized shipping cases. An additional case for RF can also be provided to pack amplifiers or modems.

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

- **Intelsat and Eutelsat Compliant (with Appropriate Feed)**
- **Multi-Band X, Ku, Ka, or X/Ka Simultaneous Feeds**
- **4 Piece Segmented Carbon Fiber Reflector**
- **3 Axis Controller for Autolocate and Tracking Options**
- **Compact Pedestal featuring easy point and peak control**
- **Ships in 3 Ruggedized Cases (plus RF case)**
- **High Gain / Low Cross Pol Design**
- **Multiple Integration Options**
- **Excellent Reliability**
- **Minimal Maintenance**



# TECHNICAL SPECIFICATIONS



<i>Electrical Specifications</i>	2 Port X Band Circular (Std)		2 Port X Band Circular (Low Axial Ratio)		2 Port Cross Pol Ku Band Linear / Standard Feed		2 Port Cross Pol Ku Band Linear / Mode Matched Feed		2 Port Cross Pol Ka Band Circular	
	Rx	Tx	Rx	Tx	Rx	Tx	Rx	Tx	Rx	Tx
Frequency (GHz)	7.25 - 7.75	7.9 - 8.4	7.25 - 7.75	7.9 - 8.4	10.70 - 12.75	13.75 - 14.5	10.95 - 12.75	13.75 - 14.5	20.2 - 21.2	30.0 - 31.0
Gain (Midband, dBi)	39.0	39.6	38.9	39.5	43.4	45.0	43.4	45.0	47.6	51.0
Noise Temperature (K)										
10 deg El	63		85		60		62		160	
20 deg El	57		67		53		55		125	
30 deg El	54		63		51		52		110	
Axial Ratio	1.5 dB	1.5 dB	0.5 dB	0.5 dB					1.5 dB	1.0 dB
Cross Pol										
On Axis	-21.3 dB	-21.3 dB	-30 dB	-30 dB	-35 dB	-35 dB	-35 dB	-35 dB	-21.3 dB	-24.8 dB
in 1 dB BW	-21.3 dB	-21.3 dB	-30 dB	-30 dB	-27 dB	-27 dB	-25 dB	-35 dB	-21.3 dB	-24.8 dB
Beamwidth, Midband (3 dB)	1.8°	1.6°	1.8°	1.6°	1.1°	0.9°	1.1°	0.9°	0.62	0.42
Sidlobe Compliances	Mil-Std-188-164B		Mil-Std-188-164B			Meets ITU 580		Meets ITU 580 Eutelsat		Meets DSCS
VSWR	1.30:1	1.30:1	1.30:1	1.30:1	1.35:1	1.30:1	1.45:1	1.30:1	1.35:1	1.30:1
Isolation										
Tx/Rx	-110 dB	0 dB	-110 dB	0 dB	-85 dB	0 dB	-85 dB	0 dB	-85 dB	0 dB
Rx/Tx	0 dB	-110 dB	0 dB	-110 dB	0 dB	-30 dB	0 dB	-30 dB	0 dB	-70 dB

<i>Mechanical / Environmental Specifications</i>	
Reflector	1.5 meters (58.7 in) Carbon Fiber Reinforced Polymer
Reflector Configuration	4 Piece Segmented Carbon Fiber Single Offset
Antenna Travel	
Azimuth	+/- 180° continuous
Elevation	5 - 90° of reflector bore sight
Polarization	± 90°
Packaging (3 Cases + RF case)	
Positioner /Actuator Case	37.5" x 27.5" x 14.5" (98 lbs)
Legs / Backbeam Case	44.9" x 25.3" x 16.5" (102 lbs)
Reflector Case	42" x 13" x 34.5" (70 lbs)
RF Case - for CFE Amps / Feed / Integration	Typical - 37.5" x 27.5" x 14.5"
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)
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