

# 1841 PELORIS

## 1.8 Meter Motorized Vehicle-Mount SNG Antenna



- *Intelsat and Eutelsat Compliant (with Appropriate Feed)*
- *Multi-Band C, X, Ku or Ka band Frequencies*
- *Multiple Integration Options*
- *Integrated Controller with Tracking Options Available*
- *Carbon Fiber Reflector with Precision Aluminum Backbeam Structure*
- *Low Profile and Space-Optimizing Stow Position*
- *Cable Drive Positioning System*
- *Superior Stability in Wind*
- *Excellent Reliability*
- *Minimal Maintenance*

The Sat-Lite Technologies Model 1841 vehicle-mount antenna is a robust and light-weight precision antenna designed for the most demanding high power broadband applications. This antenna features a carbon fiber composite reflector and aluminum backbeam structure designed to provide exceptional performance in a lightweight package. The custom-designed elevation-over-azimuth cable drive pedestal provides superior stiffness with minimal backlash and maintenance.

In addition, the antenna has a long focal length geometry (0.8 F/D) 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 are also available for 2 port, 3 port, and 4 port applications. A host of amplifier mounting packages or waveguide installations are also standard product offerings.



<i>Electrical Specifications</i>	2 Port Cross-Pol C Band		2 Port Cross-Pol C Band		2 Port X Band		2 Port Cross-Pol Ku Band		2 Port Ka Band	
	Extended Linear Feed		Circular Feed		Circular Polarization		Linear / Mode Matched Feed		Circular Polarization	
	Rx	Tx	Rx	Tx	Rx	Tx	Rx	Tx	Rx	Tx
Frequency (GHz)	3.40 - 4.20	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	30.0 - 31.0
Gain (Midband, dBi)	35.2	39.5	35.4	39.7	41.0	41.6	45.0	47.1	49.3	52.7
Noise Temperature (°K)										
10 deg E	48		55		68		54		145	
20 deg E	43		50		64		48		125	
Cross Pol										
On Axis	-30 dB	-30 dB	-15.3 dB	-17.7 dB	-21.3 dB	-21.3 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	-21.3 dB	-24.8 dB
Axial Ratio	Meets ITU 580 Beyond Mainbeam		3 dB	2.3 dB	1.5 dB	1.5 dB	Meets ITU, FCC 25.209,		1.5 dB	1 dB
Sidelobe Compliances			Meets ITU 580 Beyond Mainbeam		Meets DSCS			Mil-Std 188-164A		
VSWR	1.40:1	1.30:1	1.30:1	1.30:1	1.30:1	1.30:1	1.4:1	1.30:1	1.35:1	1.30:1
Isolation										
Tx/Rx	-85 dB	0 dBm input	-70 dB	0 dBm input	-110 dB	0 dBm input	-85 dB	0 dBm input	-85 dB	0 dBm input
Rx/Tx	0 dBm input	-35 dB	0 dBm input	-35 dB	0 dBm input	-110 dB	0 dBm input	-30 dB	0 dBm input	-30 dB

<i>Mechanical/Environmental Specifications</i>	
Reflector	1.8 meters (70.87in) - Carbon Fiber
Reflector Offset Angle (deg)	17.8
Antenna Travel	
Azimuth	± 200° continuous
Elevation	0 - 90° of reflector boresight
Polarization	± 90°
Antenna Drive Rate	
Azimuth	1.5°/sec
Elevation	1.5°/sec
Polarization	2°/sec
Temperature	
Operational	-30 to 60°C (-22 - 140°F)
Survival	-40 to 70°C (-40 - 158°F)
Tracking Loss (operational winds)*	2dB peak (Ku-band Rx)
Winds <sup>1</sup>	
Operational	45 mph Gusting to 60 mph (72 kph G 96 kph)
Survival	80 mph (128 kph) any position 90 mph (145 kph) stowed
Antenna Stowed Dimensions	Length: 95.38" (2423mm) Width: 71" (1803mm) Height: 18.30 in (465 mm)
Weight	265 lb (121 kg) - without integration
Integration <sup>2</sup>	
Feedboom Mounted	100 lbs (45 kg)
Positioner Mounted	250lbs (113 kg)
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

\* Using appropriate tracking controller      \*\* Contact Factory  
 1 Dependent on vehicle capabilities  
 2 Dependent on mounting position relative to elevation axis  
 Note: Specifications subject to change without notice