

1841 PELORIS

1.8 Meter Motorized Vehicle-Mount SNG Antenna



- ***Intelsat and Eutelsat Compliant***
- ***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***
- ***Roto-Lok® 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 Roto-Lok® 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.



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Electrical Specifications	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 RSCC 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	3.40 - 4.20	5.725 - 6.525	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	39.6	35.1	39.5	41.3	42.0	45.0	47.1	49.6	53.0
Noise Temperature (*K)										
10 deg El	48		55		56		54		145	
20 deg El	43		50		52		48		125	
Cross Pol										
On Axis	-30 dB	-30 dB	-21.3 dB	-30 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	-21.3 dB	-26 dB	-21.3 dB	-21.3 dB	-25 dB	-35 dB	-21.3 dB	-24.8 dB
Axial Ratio			1.5 dB	0.5 dB	1.5 dB	1.5 dB			1.5 dB	1 dB
Sideline Compliances	Meets ITU 580 Beyond Mainbeam		Meets ITU 580 Beyond Mainbeam		Meets DSCS		Meets ITU, FCC 25.209,		MI-Std 188-164A	
VSWR	1.40:1	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
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	-35 dB	0 dBm input	-50 dB	0 dBm input	-110 dB	0 dBm input	-30 dB	0 dBm input	-30 dB

Mechanical/Environmental Specifications

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 ¹	
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: 99" (2515mm) Width: 71" (1803mm) Height: 19 in (483 mm)
Weight	265 lb (120 kg) - without integration
Integration ²	
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 ² (1000 Kcal/h/m ²)
Radial Ice (survival)	1 in (25.4 mm)
Corrosive Atmosphere	As encountered in coastal and/or industrial areas

850-0035-B

* 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