

# 1811 PELORIS

## 1.8 Meter Motorized Vehicle-Mount 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 and Backbeam**
- **Low Profile and Space-Optimizing Stow Position**
- **Cable Drive Positioning System**
- **Superior Stability in Wind**
- **Excellent Reliability**

The Sat-Lite Technologies Model 1811 vehicle-mount antenna offers the most robust and light-weight antenna of its type and size available. This antenna features a carbon fiber composite reflector and backbeam structure designed to provide exceptional performance in a lightweight package. The custom-designed elevation-over-azimuth cable drive pedestal provides superior stiffness over existing products on the market.

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 are available.



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<i>Electrical Specifications</i>	2 Port Cross-Pol C Band Extended 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 Ka Band 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 El	48		55		68		54		145	
20 deg El	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			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,		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 wind)	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: 18.50 in (470 mm)
Weight	240 lb (110 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

1 Dependent on vehicle capabilities

2 Dependent on mounting position

Note: Specifications subject to changewithout notice