

# 1811 PELORIS

## 1.8 Meter Motorized Vehicle-Mount 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 Reinforced Polymer Structure – Lightweight and Stiff*
- *Low Profile and Space-Optimizing Stow Position*
- *Cable Drive Positioning System*
- *Superior Stability in Wind*
- *Excellent Reliability*
- *Minimal Maintenance*

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.



[www.servsat.com](http://www.servsat.com)  
770-754-4547

# TECHNICAL SPECIFICATIONS



Electrical Specifications	2 Port Cross-Pol C Band Std. Linear Feed		2 Port Cross-Pol C Band Circular Feed		2 Port X Band Circular Polarization		2 Port Cross-Pol Ku Band Linear / Standard Feed		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	Rx	Tx
Frequency (GHz)	3.625 - 4.2	5.85 - 6.425	3.625 - 4.2	5.85 - 6.425	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)	35.6	39.8	35.4	39.7	41.3	42.0	45.1	47.0	45.0	47.1	49.6	53.0
Noise Temperature (*K)												
10 deg El	45		55		56		56		54		**	
20 deg El	40		50		52		50		48		**	
Cross Pol												
On Axis	-35 dB	-35 dB	-15.3 dB	-17.7 dB	-21.3 dB	-21.3 dB	-35 dB	-35 dB	-35 dB	-35 dB	-24.8 dB	-24.8 dB
in 1 dB BW	-26 dB	-26 dB	-15.3 dB	-17.7 dB	-21.3 dB	-21.3 dB	-27 dB	-27 dB	-25 dB	-35 dB	-24.8 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	Meets ITU, FCC 25.209, Eutelsat		Meets ITU	
VSWR	1.30:1	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	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	-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	-30 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 <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      \*\* Contact Factory

1 Dependent on vehicle capabilities

2 Dependent on mounting position relative to elevation axis

Note: Specifications subject to change without notice

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