1511 PELORIS

1.5 Meter Motorized Vehicle-Mount Antenna

- ***Intelsat and Eutelsat Compliant***
- ***Multi-Band C, X, Ku or Ka band Capable***
- ***Integrated Controller with Tracking Options Available***
- ***Carbon Fiber Reinforced Polymer Structure – Lightweight and Stiff***
- ***Low Profile and Space-Optimizing Stowed Configuration***
- ***High Gain / Low Cross Pol Design***
- ***Superior Stability in Wind***
- ***Multiple Integration Options***
- ***Excellent Reliability***
- ***Minimal Maintenance***

The Sat-Lite Technologies Model 1511 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 pedestal provides superior stiffness for excellent performance in the most demanding environments. The unique 1.5 meter antenna geometry allows for compact stowing utilizing less vehicle space than most 1.2 meter mobile antennas.

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.

SAT-LITE technologies

TECHNICAL SPECIFICATIONS

Electrical Specifications	2 Port C Band Linear Feed		2 Port C Band Circular Feed		2 Port X Band Circular		2 Port Cross Pol Ku Band Linear / Standard Feed		2 Port Cross Pol Ku Band Linear / Mode Matched Feed	
	Rx	**Tx**	**Rx**	**Tx**	**Rx**	**Tx**	**Rx**	**Tx**	**Rx**	**Tx**
Frequency (GHz)	3.625 - 4.20	5.85 - 6.425	3.625 - 4.20	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
Gain (Midband, dBi)	33.4	37.2	33.3	37.1	39	39.6	43.4	45.0	43.4	45.2
Noise Temperature (°K)										
10 deg El	45		54		79		70		65	
20 deg El	40		47		61		60		58	
Axial Ratio			3.0 dB	2.3 dB	1.5 dB	1.5 dB				
Cross Pol										
On Axis	-30 dB	-30 dB	-15.3 dB	-17.5 dB	-21.3 dB	-21.3 dB	-35 dB	-35 dB	-35 dB	-35 dB
in 1 dB BW	-26 dB	-26 dB	-15.3 dB	-17.5 dB	-21.3 dB	-21.3 dB	-27 dB	-27 dB	-25 dB	-35 dB
Sidelobe Compliances	IESS 601 Std G		IESS 601 Std G		Meets DSCS			Meets ITU 580 FCC		Meets ITU 580 FCC
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	1.50:1	1.30:1
Isolation										
Tx/Rx	-70 dB	0 dBm input	-60 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

Mechanical / Environmental Specifications	
Reflector	1.5 meters (58.75 in) Carbon Fiber Reinforced Polymer
Reflector Configuration	Parabolic Single Offset, 0.78 F/D (16.9 deg offset)
Antenna Travel	
Azimuth	± 200° continuous
Elevation	0 - 90° of reflector bore sight
Polarization	± 90°
Antenna Drive Rate	
Azimuth	4.0°/sec
Elevation	3.0°/sec
Polarization	3.0°/sec
Temperature	
Operational	-30 to 60°C (-22 - 140°F)
Survival	-40 to 70°C (-40 - 158°F)
Pointing Loss (operational winds)	2 dB 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 100 mph (161 kph) stowed
Antenna Stow Height	17 in (432 mm)
Weight	175 lb (79.5 kg) - with Ku Feed
Integration[2]	
Feedboom Mounted[3]	70 lbs
Positioner Mounted (Saddle Bag Option)	250 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^2 (1000 Kcal/h/m^2)
Radial Ice (survival)	1 in (25.4 mm)
Corrosive Atmosphere	As encountered in coastal and/or industrial areas

1 Dependent on vehicle capabilities
2 Dependent on mounting position relative to elevation axis
3 Std weight shown, consult factory for special requirements
Note: Specifications subject to change without notice

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