

2411 PELORIS

2.4 Meter Motorized Vehicle-Mount Antenna



3 Piece Reflector Option - Stowed

The Sat-Lite Technologies Model 2411 vehicle-mount 2.4 M antenna offers the most robust, lightweight and compact antenna of its type and size available. This antenna features a carbon fiber composite reflector and backbeam structure designed to provide exceptional performance along with a custom-designed elevation-over-azimuth cable drive pedestal to reduce vehicle mounting space.

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. The antenna is available with multiple controller configurations that include manual jog control, autolocate with peaking options, and full tracking capabilities with beacon receiver.

- **Intelsat and Eutelsat Compliant (Using appropriate feed)**
- **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**
- **Single or 3 Piece Reflector Option**
- **Motorized Folding Wing Option (3 Piece)**



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TECHNICAL SPECIFICATIONS



<i>Electrical Specifications</i>	2 Port Cross-Pol C Band Extended Linear Feed		2 Port Cross-Pol C Band Low Axial Ratio Circular		2 Port X Band Circular Polarization		2 Port Cross-Pol Ku Band Linear Std 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)	3.4 - 4.2	5.85 - 6.725	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 - 31
Gain (midband, dBi)	38.0	41.8	37.9	42.0	43.4	43.8	47.2	49.1	47.1	49.1	51.7	54.9
Noise Temperature (K)												
10 deg El	46		53		72		62		64		160.0	
20 deg El	42		50		66		58		60		120.0	
40 deg El	36		47		64		57		56		105.0	
Typical G/T (20 deg El)	35 deg LNA 18.4 dB/K		18.2 dB/K		21.9 dB/K		25.7 dB/K		25.5 dB/K		28 dB/K	
Cross Pol												
On Axis	-30 dB	-30 dB	-20 dB	-27 dB	-21.3 dB	-21.3 dB	-35 dB	-35 dB	-35 dB	-35 dB	-21.3 dB	-24.8 dB
in 1 dB BW	-28 dB	-28 dB	-20 dB	-27 dB	-21.3 dB	-21.3 dB	-27 dB	-27 dB	-25 dB	-35 dB	-21.3 dB	-24.8 dB
Axial Ratio			1.6 dB	0.75 dB	1.5 dB	1.5 dB					< 1.5 dB	< 1.0 dB
Sidelobe Compliances	Meets ITU 580 Beyond Mainbeam		Meets ITU 580 Beyond Mainbeam		Meets Mil-Std 188-164		Meets ITU, FCC 25.209		Meets ITU, FCC 25.209, Eutelsat		Meets ITU 580	
VSWR	1.40:1	1.30:1	1.35:1	1.30:1	1.30:1	1.30:1	1.35:1	1.30:1	1.40:1	1.30:1	1.30:1	1.30:1
Isolation												
Tx/Rx	-85 dB	0 dB input	-85 dB	0 dB input	-110 dB	0 dB input	-85 dB	0 dB input	-85 dB	0 dB input	-85 dB	0 dB input
Rx/Tx	0 dB input	-30 dB	0 dB input	-30 dB	0 dB input	-110 dB	0 dB input	-35 dB	0 dB input	-35 dB	0 dB input	-70 dB
Max Power Handling (Continuous)	1.0 kW		1.0 kW		1.0 kW		1.0 kW		1.0 kW		200 W	
WG Interface	CPR-229	CPRG-137	CPR-229	CPRG-137	WR112 UBR84	WR112 UBR84	WR75-Cover	WR75-Cover	WR75-Cover	WR75-Cover	WR42	WR28

<i>Mechanical/Environmental Specifications</i>	
Reflector	2.4 meters (95 3/4in) - Carbon Fiber
Reflector Offset Angle (deg)	16
Antenna Travel	
Azimuth	± 200° continuous
Elevation	0 - 90° of reflector boresight
Polarization	± 90°
Antenna Drive	Drive Rate Resolution
Azimuth	up to 1°/sec 0.4° Std / 0.1° Optional
Elevation	up to 0.8°/sec 0.1°
Polarization	up to 2°/sec 0.5°
Temperature	
Operational	-30 to 60°C (-22 - 140°F)
Survival	-40 to 70°C (-40 - 158°F)
Pointing Loss (opeational winds)	2dB peak (Ku-band Rx)
Winds ¹	
Operational	45 mph Gusting to 60 mph (72 kph G 96 kph)
Survival	75 mph (128 kph) any position
	90 mph (145 kph) stowed
Antenna Stowed Dimensions	Length: 110" (2794mm) Width: 95 3/4" (2431mm) Height: 23 5/8 in (600 mm)
Weight	550 lb (250 kg) - without feed/integration
Integration	
Feedboom Mounted	150 lbs (68 kg)
Positioner Mounted	325lbs (147 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

* Using appropriate tracking controller ** Contact Factory
 1 Dependent on vehicle capabilities
 2 Dependent on mounting position relative to elevation axis
 3. For dual waveguide runs, standard travel is ±150°.
 Note: Specifications subject to change without notice.