

2441 PELORIS

2.4 Meter Motorized Vehicle-Mount Antenna



- **Intelsat and Eutelsat Compliant (using appropriate feed)**
- **Multi-Band C, X, Ku or Ka band Frequencies**
- **Multiple Integration Options**
- **Integrated or Rack Mounted Controller with Tracking Options Available**
- **Carbon Fiber Reflector / Precision Aluminum Backbeam**
- **Low Profile and Space-Optimizing Stow Position**
- **Cable Drive Positioning System**
- **Single or 3 Piece Reflector Option**
- **Motorized Folding Wing Option (3 Piece)**

The Sat-Lite Technologies Model 2441 vehicle-mount 2.4 M SNG antenna is robust and light-weight designed for demanding high power broadband applications. This antenna features a high precision carbon fiber composite reflector and aluminum backbeam structure designed to provide exceptional performance in a lightweight package. The antenna also uses Sat-Lite's elevation-over-azimuth cable drive pedestal which offers reduced 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.



TECHNICAL SPECIFICATIONS



Electrical Specifications	2 Port Cross-Pol C Band Extended Linear Feed		2 Port Cross-Pol C Band Std. Linear Feed		2 Port Cross-Pol C Band Std. Circular Feed		2 Port Cross-Pol C Band Low Axial Ratio Circular Feed		2 Port Cross-Pol C Band Insat Linear		2 Port Cross-Pol Ku Band Linear Std Feed		2 Port Cross-Pol Ku Band Linear / Mode Matched Feed	
	Rx	Tx	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	3.625 - 4.2	5.85 - 6.425	3.625 - 4.2	5.85 - 6.425	4.5 - 4.8	6.725 - 7.025	10.70 - 12.75	13.75 - 14.5	10.95 - 12.75	13.75 - 14.5
Gain (midband, dBi)	37.6	41.8	38.2	42.1	38.0	42.1	38.1	42.1	39.5	43.1	47.3	49.3	47.3	49.3
Noise Temperature (K)														
5 deg El	48		48		54		54		50		66		64	
10 deg El	45		45		51		51		41		62		60	
20 deg El	37		37		49		49		38		58		56	
40 deg El	35		35		48		48		36		57		56	
Typical G/T (20 deg El)														
35 deg LNA	18.4 db/K		19.5 db/K		18.7 db/K		18.8 db/K			20.1 db/K				
45 deg LNA														
55 deg LNA														
70 deg LNA											25.9 db/K		25.8 db/K	
Cross Pol														
On Axis	-30 dB	-30 dB	-30 dB	-30 dB	-15.2 dB	-17.5 dB	-21.3 dB	-27.3 dB	-35 dB	-35 dB	-35 dB	-35 dB	-35 dB	-35 dB
in 1 dB BW	-28 dB	-28 dB	-28 dB	-28 dB	-15.2 dB	-17.5 dB	-21.3 dB	-27.3 dB	-28 dB	-28 dB	-27 dB	-27 dB	-25 dB	-35 dB
Axial Ratio					3.0 dB	2.3 dB	1.5 dB	0.75 dB						
Sidelobe Compliances	Meets ITU 580 Beyond Mainbeam		Meets ITU 580 Beyond Mainbeam		Meets ITU 580 Beyond Mainbeam		Meets ITU 580 Beyond Mainbeam		Meets ITU 580 Beyond Mainbeam		Meets ITU, FCC 25.209		Meets ITU, FCC 25.209 Eutelsat	
VSWR	1.40:1	1.30:1	1.35:1	1.30:1	1.35:1	1.30:1	1.30:1	1.30:1	1.35:1	1.30:1	1.35:1	1.30:1	1.40:1	1.30:1
Isolation														
Tx/Rx	-85 dB	0 dB input	-85 dB	0 dB input	-70 dB	0 dB input	-85 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	-30 dB	0 dB input	-30 dB	0 dB input	-30 dB	0 dB input	-35 dB	0 dB input	-35 dB
Max Power Handling		2.0 kW		2.0 kW		2.0 kW		2.0 kW		1.0 kW		1.0 kW		1.0 kW
WG Interface	CPR-229	CPRG-137	CPR-229	CPRG-137	CPR-229	CPRG-137	CPR-229	CPRG-137	CPR-229	CPRG-137	WR75-Cover	WR75-Cover	WR75-Cover	WR75-Cover

Contact Factory for X & Ka Band or Additional Frequencies

Mechanical/Environmental Specifications	
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	Std. Drive Rate Std. 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 (operational winds)	2dB (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" (279cm) Width: 95 3/4" (243cm) Height: 23 3/4 in (60 cm)
Weight	620 lb (282 kg) - Typical with Ku Feed
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°.

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