

2638 Orbis GEO Tracking Antenna

2.6 Meter Multiband



- **Portable Package, Ships in Cases, Sets Up in 30 Minutes.**
- **Full Motion Elevation Over Azimuth Pedestal Designed for GEO applications**
- **Optional XY Positioner / Controller for LEO / MEO applications**
- **Multi-Band Capable Including S, C, X, Ku, and Ka Band Frequencies**
- **Integrated High Performance Servo Control System with Precision Tracking**
- **Optional Integrated L Band Beacon Receiver with Spectrum Analyzer**
- **Precision Carbon Fiber Reflector, No Special Tools / Bolt Together Design for Ka Performance**

Other Options

- **Antenna & Hub mounted Integrations**
- **Higher Speed Drives**
- **Multi-Carrier X Band**

The Sat-Lite Technologies Model 2638 antenna is designed to offer high performance portability in a lightweight package. The antenna features a 9-pc segmented carbon fiber composite reflector and a high-performance servo control system. Assembly time is less than 30 minutes. The Elevation over Azimuth pedestal provides excellent tracking performance using the internally integrated servo controller. The antenna is designed to meet international performance specifications for GEO applications. The unit is also upgradeable to LEO / MEO applications with an optional high speed XY Positioner / Controller.



TECHNICAL SPECIFICATIONS



Electrical Specifications (other bands available)	2 Port S Band Circular	2 Port C Band Circular	2 Port X Band		2 Port Cross-Pol Ku Band		4 Port Ka Band	
	Receive Only	Receive Only	Rx Only Circular Polarization		Tx/Rx Linear Std Feed		Tx/Rx Circular Polarization	
	Rx	Rx	Rx	Tx	Rx	Tx	Rx	Tx
Frequency (GHz)	2.0 - 2.5	3.6 - 4.2	7.25-7.75	7.9-8.4	10.70 - 12.75	13.75 - 14.5	17.7 - 21.2	27.5 - 31
Gain (midband, dBi) (Includes Feed Losses & Filter Losses)	32.8	38.4	44.1	44.5	48.0	49.4	52.3	55.4
Noise Temperature (K)								
10 deg El			85		69		160	
20 deg El	58	50	75		61		125	
40 deg El			70		58		110	
Typical G/T (40 deg El)								
2.3 GHz / 60 K LNA	11.5 dB/K							
4 GHz / 35 K LNB			18.5 dB/K					
7.5 GHz / 50 K LNB			22.7 dB/K					
11.8 GHz / 55 K LNB					26.8 dB/K			
20.7 GHz / 110 K LNB							28.3 dB/K	
Cross Pol								
On Axis	-15.3 dB	-21.3 dB	-18.8 dB	-18.8 dB	-35 dB	-35 dB	-27 dB	-27 dB
in 1 dB BW	-15.3 dB	-21.3 dB	-18.8 dB	-18.8 dB	-35 dB	-35 dB	-27 dB	-27 dB
Axial Ratio	< 3.0 dB	1.5 dB	2.0 dB	2.0 dB			0.75 dB	0.75 dB
	Meets ITU 465 Beyond	Meets ITU 465 Beyond	Meets ITU 580		ITU 580		Meets ITU 580	
Sidelobe Compliances	Mainbeam	Mainbeam			FCC 25.209			
VSWR	1.40:1	1.30:1	1.30:1	1.30:1	1.30:1	1.30:1	1.30:1	1.30:1
Isolation								
Tx/Rx	-	-	-110 dB	0 dB input	-85 dB	0 dB input	-85 dB	0 dB input
Tx/Tx	-	-	-	-	-	-	17 dB	17 dB
Rx/Rx	16 dB	17 dB	-	-	-	-	17 dB	17 dB
Rx/Tx	-	-	0 dB input	-110 dB	0 dB input	-30 dB	0 dB input	-70 dB
Max Power Handling (Continuous)	-	-	-	250 W	-	400 W	-	100 W
WG Interface	Type N(f)	CPR-229	WR112	WR112	WR75	WR75	WR42	WR28

Mechanical / Environmental Specifications

Reflector	2.6 M Carbon Fiber
Reflector Configuration	9 Piece Symmetrical Ring Focus
Antenna Travel	
Azimuth	± 180° with fine adjustment, @ 5°/ Sec
Elevation	5 - 90° of reflector bore sight, @ 2.5° / Sec
Polarization	± 90°
Packaging (Includes 4 Cases + RF)	
Reflector Case	46 x 41 x 24" @ 172 lbs (78 Kg)
El / Az Positioner Case	44.9" x 25.3" x 16.5" 140 lbs (64.5 Kg)
Pedestal / Controller / Struts / Footpads Case	54 x 24 x 17" @ 154 lbs (70 Kg)
Pedestal Legs / Struts Case	66 x 22 x 14" @ 110 lbs (50 Kg)
RF Case (per band - with Room for BUC)	Per Band
Temperature	
Operational	-20 to 60°C (-4 to 140°F)
Survival	-40 to 70°C (-40 to 158°F)
Pointing Loss (operational winds)	2 dB Peak Loss (with servo controller)
Winds	
Operational	30 Gusting to 45 mph (48 kph G 72 kph) with ballast or anchors
Survival	60 mph (96 kph) with tie downs / reflector stowed
Rain	
Operational	2 in/h (5 cm/h)
Survival	4 in/h (10 cm/h)
Relative Humidity	0 - 100% (condensing)
Solar Radiation	360 btu/h/ft ² (1000 Kcal/h/m ²)
Radial Ice (survival)	1/2 in (12.7 mm)
Corrosive Atmosphere	As encountered in coastal and/or industrial areas

Performance dependent on proper assembly and anchoring.
Note: Specifications subject to change without notice