

MODEL 15138 Orbis

1.5m XY LEO MEO GEO Tracking Antenna



The Sat-Lite Technologies Model 15138 Transportable X-Y antenna is designed for 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 20 minutes. The X-Y Axis pedestal provides excellent high-speed performance for multiple applications. The antenna is designed to meet international performance specifications for LEO / MEO / GEO tracking requirements. The servo system provides full-motion control for continuous operation.



Mechanical / Environmental Specifications	
Reflector	1.5 M Carbon Fiber
Reflector Configuration	9 Piece Symmetrical
Antenna Travel	
X-Axis	+/-90° continuous, > 15 deg / sec
Y-Axis	0 - 180°, > 15 deg / sec
Polarization	Optional
Packaging (3 Cases)	
Reflector	26.5 x 26.5 x 15.6 (65 lbs)
Positioner	37.5 x 27.5 x 14.5 (90 lbs)
Pedestal / Controller Components	44.9 x 25.3 x 16.5 (115 lbs)
Servo Control System	
Pedestal Mounted with Ethernet Interface	90 - 265 VAC Input Power, 500 Watts
Autolocate Features	GPS / Flux Gate Compass
Tracking	Multiple Options
	Sun Tracking / TLE Trackng
Temperature	
Operational	-30 to 60°C (-22 - 140°F)
Survival	-40 to 70°C (-40 - 158°F)
Winds	
Operational (anchored)	30 mph Gusting to 45 mph (48 kph G 72 kph)
Survival (anchored, petals removed)	75 mph

Electrical Specifications	2 Port X Band Circular (Std)		2 Port Cross Pol Ku Band Linear / Standard Feed		2 Port Cross Pol Ka Band Circular	
	Rx	Tx	Rx	Tx	Rx	Tx
Frequency (GHz)	7.25 - 7.75	7.9 - 8.4	10.70 - 12.75	13.75 - 14.5	20.2 - 21.2	30.0 - 31.0
Gain (Midband, dBi)	39.0	39.6	43.5	45.2	47.8	51.2
Noise Temperature (K)						
10 deg El	63		60		160	
20 deg El	57		53		125	
30 deg El	54		51		110	
Axial Ratio	1.5 dB	1.5 dB			1.5 dB	1.0 dB
Cross Pol						
On Axis	-21.3 dB	-21.3 dB	-35 dB	-35 dB	-21.3 dB	-24.8 dB
Beamwidth, Midband (3 dB)	1.8°	1.6°	1.1°	0.9°	0.62	0.42
Sidelobe Compliances	Mil-Std-188-164			ITU 580		ITU 580
VSWR	1.30:1	1.30:1	1.35:1	1.30:1	1.35:1	1.30:1
Isolation						
Tx/Rx	-110 dB	0 dB	-85 dB	0 dB	-85 dB	0 dB
Rx/Tx	0 dB	-110 dB	0 dB	-30 dB	0 dB	-70 dB