

90cm RxTx Class I Antenna System



RF Performance

MODEL#	90158 Ka Band	90138 Ku Band
Effective Aperture90cm (34.57 x 35.71in)	
Operating Frequency	Tx	28.00-30.00 GHz13.75-14.50 GHz
	Rx	17.80-20.20 GHz10.70-12.75 GHz
Polarization	Circular RH or LHLinear, Orthogonal	
Gain (± 0.2 dB)	Tx	47.0 dBi @ 30.00 GHz .41.0 dBi @ 14.50 GHz
	Rx	43.7 dBi @ 20.20 GHz 39.8 dBi @ 12.75 GHz
3dB Beamwidth	Tx	0.76° @ 30.00 GHz . . .0.71° @ 14.50 GHz
	Rx	1.09° @ 20.20 GHz . . .1.06° @ 12.75 GHz
Sidelobe Envelope (Tx, Co-Pol dB)	100 λ/D < Θ < 20°29 - 25 Log Θ dB	
	20° < Θ < 26.3°-3.5 dB	
	26.3° < Θ < 48°32-25 Log Θ dB	
	48° < Θ < 180°-10 dB (averaged)	
Antenna Cross-Polarization (within 1 dB B/W)	Tx . circular	25 dB30 dB
	Rx . circular	22 dB30 dB
Antenna Noise Temperature*	30° El.	
	44K	53K
VSWR	1.3:1 Max1.3:1 Max	
Isolation (Port to Port)	Tx	90dB90dB
	Rx	80dB40dB
Feed Interface	Tx	WR28WR75
	Rx	WR42WR75



90cm Antenna Product Specification

- Fine azimuth and elevation adjustment features
- ISO 9001:2008 Certificate of Registration
- Available 4' x 4' Non Pen Mount
- Meets or exceeds regulatory agency requirements
- Anatel Certificate No. 06644-17-06307



Mechanical Performance

Antenna Optics	One-Piece Offset Feed Prime Focus	
Mount Type	Elevation over Azimuth	
Maximum Radio Weight	4lb for RF Electronics	
Elevation Adjustment Range	5° - 90° Continuous Fine Adjustment	
Azimuth Adjustment Range	360° Continuous, ± 5° Fine	
Mast Pipe Interface	60.3mm (2.38 in) Diameter O.D.	
Wind Loading	Operational	72 km/h (45 mph)
	Survival	241 km/h (150 mph)
Temperature	-50°C to 60°C	
Humidity	0 to 100% (Condensing)	
Rain	1/2" Per Hour	
Atmosphere	Standard Hardware Meets 720 Hour	
	Salt Spray Test Requirements (ASTM B-117)	
Solar Radiation	360 BTU/h/ft2	
Shock and Vibration	As Encountered During Shipping and Handling	

*Gain and Noise Temperature at Feed Horn Flange
(All Specifications Typical)

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