

90cm RxTx Class I Antenna System



RF Performance

MODEL#	90158 Ka Band	90138 Ku Band
Effective Aperture . . . . .	.90cm (34.57 x 35.71in)	
Operating Frequency	Tx 28.00-30.00 GHz . . . . .	.13.75-14.50 GHz
	Rx 18.10-20.20 GHz . . . . .	.10.70-12.75 GHz
Polarization	Circular RH or LH Linear, 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 dB 30 dB
	Rx . . . circular . . . . .	.22 dB 30 dB
Antenna Noise Temperature*		
	30° El.	44K 53K
VSWR . . . . .	.1.3:1 Max 1.3:1 Max	
Isolation (Port to Port)	Tx . . . . .	.90dB 90dB
	Rx . . . . .	.80dB 40dB
Feed Interface	Tx	WR28 WR75
	Rx	WR42 WR75



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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