

## 3M EARTH STATION ANTENNA

Electrical Specification
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Type	C-Band		Ku-Band	
	Receive	Transmit	Receive	Transmit
<b>Operating Frequency In Ghz</b>	3.625-4.20	5.85-6.425	10.95-12.75	13.75-14.50
<b>Gain - Mid Band dBi</b>	40.12	43.70	49.42	50.73
<b>Polarization</b>	Linear/Circular		Linear	
<b>XPD (on axis) dB</b>	35	35	35	35
<b>XPD across 1dB B/W</b>	33	33	33	33
<b>Axial Ratio 2 port (CP) 4 port</b>	1.30 1.06	1.90 1.06		
<b>VSWR</b>	1.25	1.25	1.25	1.25
<b>Antenna Noise Temp 2-Port Feed 10 deg. Elevation 30 deg. Elevation 50 deg. Elevation</b>				
	29k 22k 19k		48k 39k 35k	
<b>-3dB Beam Width. Mid Band</b>	1.5	1.1	0.56	0.48
<b>Typical G/T (El&gt;10 deg)</b>	22.7dB/k**		29dB/k**	
<b>TX Power Capability</b>		5Kw		2Kw
<b>Feed Interface</b>	CPR-229F	CPR-137F	WR-75	WR-75
<b>Feed Insertion loss dB</b>	0.2	0.2	0.25	0.25
<b>Isolation TX to RX dB</b>	85		85	
<b>First Side Lobe 90% Peak under Following envelope</b>	-14 29-25log theta		-14 29.25log theta	

Mechanical Specification 3M Earth Station Antenna
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<b>Antenna Diameter</b>	<b>3.0m</b>
<b>Antenna Type</b>	<b>Ring Focus</b>
<b>Surface Accuracy</b>	<b>&lt;0.35mm</b>
<b>Antenna Pointing Range</b> Azimuth Elevation Polarization	<b>0 to 360 deg (continuous)</b> <b>0 to 90 deg (continuous)</b> <b>+/- 90 deg (continuous)</b>
<b>Driver Mode</b>	<b>Manual or Motorised</b>
<b>Motor Drive System</b> Azimuth Travel Rate Elevation Travel Rate	<b>0.30 deg/sec (0.06deg/sec)</b> <b>0.20 deg/sec (0.04deg/sec)</b>

Environmental Specification
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<b>Operational Wind Speed</b>	<b>72km/h gusting to 97km/h</b>
<b>Survival Wind</b>	<b>200km/h</b>
<b>Temperature</b>	<b>-40 deg c to +60deg c</b>
<b>Relative Humidity</b>	<b>100%</b>
<b>Solar Radiation</b>	<b>1135Kcal/h/m2</b>
<b>Seismic (Survival)</b>	<b>0.3g(h) 0.15g (v)</b>
<b>Ice Loading</b>	<b>13mm Operational; 25mm Survival</b>