

## 3.7 METER EARTH STATION ANTENNA

Shaanxi Probecom Microwave Technology Co.,Ltd. is a specialized company engaged in the design and manufacture of satellite communication earth station antenna with a selected range from 1.8M to 16M (C-Band, KU-Band, Ka-Band, X-band, S-band, L-band )and relevant servo equipment including antenna control system and beacon receiver. Microwave antenna, TVRO antenna and Flyaway antenna, Microwave components and customerized products is also provided.



**Probecom 3.7Meter ringfocus antenna** providing Tx/Rx 2-port feed or Tx/Rx 4-port in switchable linear & circular polarization for C-band, 3.7m Ku band antenna only for linear polarization, can deliver exceptionally high performance for transmit/receive applications.

**Probecom 3.7 M antenna** RF specification can adhere to FCC Regulation 25.209, IESS and ITU-RS.580-5, INMARSAT, ASIASAT, INTELSAT, APT and CHINASAT, etc.

**Probecom 3.7M antenna** reflector incorporates stretch-formed doubly contoured panels with matched radials and hub for ease of field alignment. The standard designed azimuth over elevation pedestal provides a cost-effective solution for high stiffness and stability, full orbital arc coverage and fine drive performance, and ensures the pointing accuracy required for Ku-band operation.

### Highlighted Features

- \*Meets CCIR 580 and INTELSAT Requirements*
- \*CP/LP switchable feed*
- \*High RF performance*
- \*Galvanized Stainless steel hardware*
- \*Different frequency ranges from many feed configurations*
- \* Antenna reflector be pre-assembly in works, special designed taper-pin easy installation and ensure on site assembly accuracy, no theodolite required*

### Options

- \*L,S,X bands and multi-bands*
- \*800MHz bandwidth is available*
- \*Feed blower or deicing with automatic controls*
- \*Two or four Tx/Rx port in linear polarized feeds*

### Antenna Accessory

- Motorization Kits*
- Limit Switches*
- ODU Support Kits*
- Factory Feed System Testing and Documentation*
- Ocean /Air Transport Packing*
- Foundation Kit*
- Lightening Rod Kit*
- Grounding Kit Cable-Mounting Kit*
- Anti-icing and Deicing*

<b>Electrical Specification</b>					
Type		C37T		K37T	
Operating Frequency, GHz		C-Band		Ku-Band	
		Receive	Transmit	Receive	Transmit
		3.625~4.2	5.85~6.425	10.95~12.75	13.75~14.5
Gain, Mid-band, dBi		41.94	45.52	51.24	52.55
Polarization		Linear/Circular		Linear	
XPD(on Axis), dB		35	35	35	35
XPD across 1dB Beam Width, dB		33	33	33	33
Axial Ratio (Circular-Polarized)	2-Port Feed	1.30	1.09		
	4-Port Feed	1.06	1.06		
VSWR		1.25	1.25	1.25	1.25
Antenna Noise Temperature					
2-port feed					
10° Elevation		35K		49K	
30° Elevation		29K		39K	
50° Elevation		25K		35K	
-3 dB Beam Width, Mid-band		1.31°	0.87°	0.43°	0.38°
Typical G/T ( EL>10° )		24dB/K (30° LNA)		30.6dB/K (70° LNA)	
Tx. Power Capability, KW			5		2
Feed Interface		CPR—229F	CPR—137F	WR-75	WR-75
Feed Insertion Loss,dB		0.2	0.2	0.25	0.25
Isolation, Tx to Rx, dB		85		85	
First Side lobe		-14		-14	
90% Peaks under Following Envelop		29-25log $\theta$ (1° $\leq\theta < 20^\circ$ )		29-25log $\theta$ (1° $\leq\theta < 20^\circ$ )	
<b>Mechanical Specification</b>					
Antenna Diameter		3.7m			
Antenna Type		Ring Focus			
Surface Accuracy(RMS)		$\leq 0.35\text{mm}$			
Antenna Pointing Range		Azimuth	$\pm 85^\circ$		
		Elevation	0°~90°(Continuous)		
		Polarization	$\pm 90^\circ$ (Continuous)		
Drive Mode		Manual or Motorized			
Motor System	Drive	Azimuth Travel Rate	0.30°/S(0.06°/S)		
		Elevation Travel Rate	0.20°/S(0.04°/S)		
<b>Environmental Specification</b>					
Operational Wind		72km/h gusting to 97km/h			
Survival Wind		200km/h			
Temperature		-40°~+60°			
Relative Humidity		100%			
Solar Radiation		1135Kcal/h/m <sup>2</sup>			
Seismic(Survival)		0.3g(H), 0.15g(V)			