

## 4.5 MEARTH 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 4.5 Meter ring focus antenna** providing 2-port Tx/Rx feed or 4-port Tx/Rx in switchable linear & circular polarization for C-band, 4.5m Ku band antenna only for linear polarization, it can deliver exceptionally high performance for transmit/receive applications.

**Probecom 4.5 M 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.

It is widely and ideally used for Broadcasters, Service Providers, GSM operator, Satellite operator, Military and Government Agencies, FreeLands or Rescue Organizations

### 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*
- \*Ka band antenna with rotary pedestal is available*
- \* Antenna reflector be pre-assembly in works, special designed taper-pin easy instllation and ensure on site assembly accuracy, no theodolite required*

### Options

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

### Antenna Accessory

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

<b>Electrical Specification</b>					
Type		C45T		K45T	
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		43.64	47.22	52.94	54.25
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		34K		52K	
30° Elevation		24K		41K	
50° Elevation		21K		37K	
-3 dB Beam Width, Mid-band		1.08°	0.72°	0.37°	0.32°
Typical G/T ( EL>10° )		25.9dB/K (30° LNA)		32.3dB/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		4.5m			
Antenna Type		Dual Reflector Modified ring focus			
Surface Accuracy(RMS)		$\leq 0.35\text{mm}$			
Antenna Pointing Range	Azimuth	$\pm 85^\circ$			
	Elevation	0°~90°(Continuous)			
Drive Mode		Manual or Motorized			
Motor Drive	Azimuth Travel Rate	0.11°/S(0.06°/S)			
	Elevation Travel Rate	0.17°/S(0.08°/S)			
<b>Environmental Specification</b>					
Operational Wind		72km/h gusting to 97km/h			
Survival Wind		216km/h			
Temperature		-40°~+60°			
Relative Humidity		100%			
Solar Radiation		1135Kcal/h/m <sup>2</sup>			
Seismic(Survival)		0.3g(H), 0.15g(V)			
Ice Loading		13mm Operational; 25mm Survival			

## **Probecom Microwave Technology Co.,Ltd**

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