

China Starwin 4.5m Earth Station Ring Focus Antenna Datasheet



4.5m earth station manual antenna photo for reference

General Description

Starwin earth station antenna is made of high accuracy stretch-formed aluminum panel with stable structure. earth station antenna systems with satisfactory performance of high gain, low side lobe and reliable operation, easy to operate and maintenance.

Options

- High Accuracy Stretch-formed Aluminum Panel
- Meet data receive and TV receive requirement
- C-band, Ku-band, ka-band, S-band, L-band frequency as option
- Linear or Circular Polarized feed system as option
- Single/Dual Polarization as option
- Manual/Motorized as option
- High Erosion Resistance
- Assembled and tested feed system before leaving factory

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Technical Specifications

4.5meter C, Ku-band Earth Station Technical Specifications

Electrical Specification	C band Rx	C band Tx	Ku band Rx	Ku band Tx
Operating Frequency, GHz	3.4 ~ 4.2 GHz	5.85 ~ 6.65 GHz	10.95 ~ 12.75 GHz	13.75 ~ 14.5 GHz
Gain, Mid-Band, dBi	$\geq 43.5 + 20\lg(f/4)$	$\geq 47.0 + 20\lg(f/6)$	$\geq 52.8 + 20\lg(f/12)$	$\geq 54.1 + 20\lg(f/14)$
VSWR	$\leq 1.25:1$	$\leq 1.25:1$	$\leq 1.25:1$	$\leq 1.25:1$
Beam Width, -3dB	$\leq 1.10^\circ$	$\leq 0.73^\circ$	$\leq 0.39^\circ$	$\leq 0.34^\circ$
Noise Temperature, K	2/4 Ports		2/4 Ports	
10° EI	$\leq 48/50$		$\leq 58/69$	
20° EI	$\leq 40/45$		$\leq 51/60$	
30° EI	$\leq 38/40$		$\leq 49/58$	
Maximum Power Capacity, Kw		5		1
Feed Interface	CPR-229G	CPR-159G/137G	WR-75	WR-75
Polarization	Linear/Circular		Linear	
Feed Insertion Loss, dB, Including TRF	0.3/0.4	0.3/0.4	0.35/0.5	0.35/0.5
Tx to Rx Isolation, dB	≥ 85		≥ 85	
Linear Polarization, Tx to Tx Rx to Rx	≥ 30	≥ 30	≥ 30	≥ 30
Circular Polarization, Tx to Tx Rx to Rx	≥ 21	≥ 21		
Cross Polarization Isolation, Axial	≥ 35		≥ 35	
Axial Ratio	≤ 1.5	≤ 1.5		
First Side lobe	$\leq -14\text{dB}$			
Side lobe Envelop	29-25lge		$1^\circ \leq e \leq 20^\circ$	
Environmental Specification				
Wind Loading Operational	20.8m/s			
Wind Loading	35m/s			
Wind Loading Survival	55m/s			
Temperature Operational	$-20^\circ\text{C} \sim +55^\circ\text{C}$			
Humidity	5% ~ 95%			
Vibration	0.3G's(H) 0.15G's(V)			
Solar Radiation	360BTU/h/ft ²			
Ice Loading	3 cm			
Mechanical Specification				
Antenna Type	Ring Focus			

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King Post Type	Pole/Truss type/Rotary type
Drive Mode	Manual/Auto
Azimuth Range	0°~360°/±85°/0°~300°
Elevation Range	5°~90°
Polarization Range	±90°
Technology	
After panel pressing molding, first remove oil, and spraying zinc, Yellow primer, and White coating. Advanced abrasive blasting and zinc treatment for steel structure, and spraying zinc, Yellow primer, and White coating.	