

China Starwin 9m Earth Station Antenna Datasheet



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.

China Starwin Science&Technology Co., Ltd.

Tel:+8629-88664381, E-mail:sales@starwincom.com, <http://www.starwincom.com>

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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

Technical Specifications

9meter 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	10.95~12.75	13.75~14.5
Gain, Mid-Band, dBi	$\geq 49.7+20\lg(f/4)$	$\geq 53.1+20\lg(f/6)$	$\geq 58.8+20\lg(f/12)$	$\geq 60.2+20\lg(f/14)$
VSWR	$\leq 1.25:1$	$\leq 1.25:1$	$\leq 1.25:1$	$\leq 1.25:1$
Beam Width, -3dB	$\leq 0.59^\circ$	$\leq 0.40^\circ$	$\leq 0.20^\circ$	$\leq 0.17^\circ$
Beam Width, -10dB	$\leq 1.09^\circ$	$\leq 0.73^\circ$	$\leq 0.37^\circ$	$\leq 0.32^\circ$
Noise Temperature, K	2/4 Ports		2/4 Ports	
10° EI	$\leq 45/50$		$\leq 57/65$	
20° EI	$\leq 40/45$		$\leq 47/55$	
30° EI	$\leq 35/40$		$\leq 43/51$	
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	$\leq -14\text{dB}$			

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Side lobe Envelop	29-25lge	$1^{\circ} \leq \epsilon \leq 20^{\circ}$
Environmental Specification		
Wind Loading Operational	20.8m/s ~ 28.4 m/s	
Wind Loading	35m/s	
Wind Loading Survival	55m/s	
Temperature Operational	-20°C ~ +55°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	Cassegrain	
Main Reflector Diameter	9000mm	
RMS	≤ 0.5mm	
King Post Type	Truss type	
Drive Mode	Auto	
Azimuth Range	±85°	
Elevation Range	5-90°	
Polarization Range	±90°	
Technology		
<p>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.</p>		