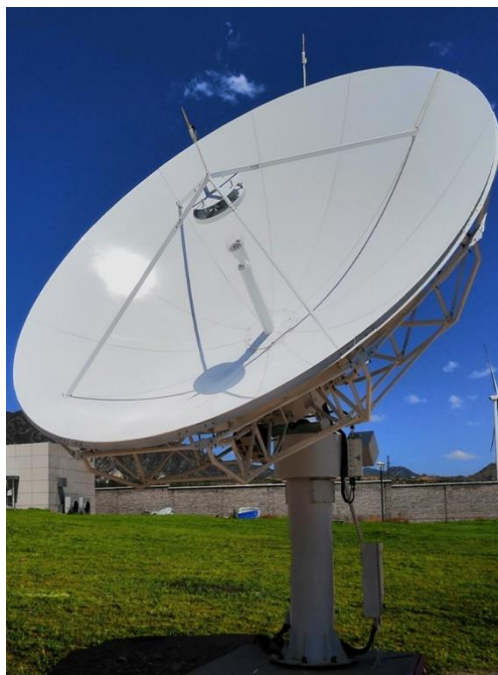


Starwin 4.5m C&Ku Band Rx-Only Antenna Datasheet



General Description of 4.5m C&Ku Band Rx-Only Antenna

Starwin 4.5m C&Ku band ring focus antenna is designed for C and Ku band receive-only operation.

- The precision reflector is constructed from stretch formed aluminum panels twelve pcs, supported by strong back structures and HUB, no need for field alignment.
- The Az/EI king post pedestal is made of hot dip zinc steel for good corrosion resistance. The wide moving range and fine drive performance, ensure the pointing and tracking accuracy.
- Equipped with special designed wide C&Ku-band feed assemblies.
- Also supply limit switches, foundation hardware kit and required packing.

Key Features

- * Meets or exceeds CCIR 580 and INTELSAT Requirements;
- * Wide azimuth range 5-355°;
- * Ext C and Ku band working frequency;
- * Hot dip zinc steel pedestal, HUB & back struts;
- * Galvanized stainless steel fasteners;
- * The antenna has strong corrosion resistance. Two layers of primer + two layers of finish paint.

Options

- * Motorization kits
- * Controller and tracking receiver
- * 2 ports/ 4 ports linear/ circular polarized feeds
- * Feed blower or deicing with automatic controls
- * Lightning Rod Kits

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- * Non-penetrating mount (NPM)
- * Integrated LNB or LNA systems
- * HPAs, converters and M&C systems
- * Turnkey installation & testing

Electrical Specification

Type	SW-450	
Operating Frequency, GHz	C-Band	Ku-Band
	Receive	Receive
	3.4~4.2	10.7~12.75
Gain, Mid-band, dBi	$\geq 43.19 + 20\lg(f/3.8\text{GHz})$	$\geq 53.53 + 20\lg(f/12.5\text{GHz})$ dBi
Polarization	Circular L/R	Linear V/H
XPD, dB		≥ 30
Axis Ratio	$\leq 1.5\text{dB}$ (2 port)	
	$\leq 1.0\text{dB}$ (4 port)	
VSWR	1.25:1	1.3:1
Antenna Noise Temperature		
10° Elevation	52K	62.3K
20° Elevation	46K	51.13K
50° Elevation	42K	44.32K
-3 dB Beam Width, Mid-band	1.23°	0.39°
Typical G/T, dB/K	$\geq 24.36 + 20\lg(f/3.8\text{GHz})$ EL =20°, LNA=30K	$\geq 32.34 + 20\lg(f/12.5\text{GHz})$ EL =20°, LNA=80K
Feed Loss, dB	≤ 0.3	
Feed Interface	CPR-229	WR75
First Sidelobe	-14	
90% Peaks under Following Envelop	29-25lg θ ($1^\circ \leq \theta \leq 20^\circ$)	

Mechanical Specification

Antenna Diameter		4.5m
Antenna Type		Ring Focus
Antenna Material		High Quality Aluminium
Surface Accuracy (RMS)		≤ 0.3 mm
Antenna Pointing Range	Azimuth	5° ~ 355°(Continuous)
	Elevation	5° ~ 90° (Continuous)
	Polarization	$\pm 90^\circ$ (Continuous)
Drive Mode		Manual or Motorized

Environmental Specification

Operational Wind	72km/h gusting to 97km/h
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Survival Wind	198km/h
Temperature	- 30°C ~ + 70°C
Relative Humidity	100 %
Seismic (Survival)	0.3g(H), 0.1g(V)
Ice Loading	13mm Operational; 25mm Survival