

China Starwin Ku 0.6m Flat Automatic Point To Sat Antenna

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1 Product introduction

China Starwin 0.6m is a super portable automatic satellite Ku band plate satellite communication antenna system that is China Starwin Science&Technology Co., Ltd. Mostly developed recently. This system has the characteristics of super portable, automatic work, strong adaptability to the environment, mainly for portable equipment requirements more designed for strict user.

The system equivalent diameter is 0.6m high performance plate feed system, and consists of Tx unit and Rx unit. The system can be configured to 20W BUC. That be able to content general user communication demand medium capacity.

The whole antenna system is made of two parts 0.6m plate feed system and a host system. Simple and convenient disassembly without any tool.



Working condition of the system diagram



Seat frame of state diagram

The characteristics of the system design

The antenna system are all installed in an import protection box. Two pieces of plate feeder main surface, a seat frame (including control, power supply and RF subsystem) and cable etc. annex into a import protection box. Protective box adopts America import protection product transport box, materials for high performance resin, with a roller and a draw rod, It can Laketike lift, dimensions of 7 95 x 518 x 393 mm. The packing appearance as shown below:



2.The characteristics of the system design

China Starwin 0.6m system that is China Starwin Science&Technology Co., Ltd.research which have proprietary intellectual property rights completely,the system feature as follows:

- 1.The plate feeding surface:the system use two ku band plate feed surface , receive unit and transmit unit.It has the characteristics of high efficiency and simple assembly.
- 2.Good portability:the system use single case,total weight less than 34kg in articles for state (contain 20WBUC),carrying box is safe and reliable, it can pull up, host weight less than 21kg (without BUC and carrying case);
3. Erecting fast:Antenna divide into two parts host and plate feed.It only need put two plate point surface on the host,without any tools in the process and simple to operate;

4. Simple operation: Automatic working mode, One Keys and wireless terminal control made the system operation very simple and convenient, meanwhile it has manual function completely greatly improved the system serviceability;
5. Superior wind stability: Plate feed mostly use feed forward center connection mode, working height is very low and optimization of the position of the center of gravity that ensure the antenna system with the structure of wind superior firm performance, greatly difference and surpass both here and abroad other auto and manual portable antenna system in firm performance;
6. Multiple control platform: It use multi - OS platform, multi -terminal mode (device, plate, computer) to control in a wired or wireless mode and use IE browser Graphical human-machine interface didn't install third - party software;
7. Wide range: the system equipped 2~20W ku band BUC, EIRP could reached 39.3~52.2dBW that achieve communication demand medium capacity in small aperture antenna.
8. The whole work voltage: the system use 90~264VAC power supply mode and use in the world and also provide firm power supply for BUC and LNB.
9. Quad tripod support: Novel structure, compact, portable, reliable facilitates complex terrain erection and has a strong ability to work the fording, fording ability didn't less than 15cm.
10. satellite searching: The unique iPstar tracking technology and Special satellite parameter table made system has ability of real automatic tracking iPstar satellites(no beacon) to avoid the low defect of accuracy and precision reference finder mode brought ;

3.The main technical indexes of antenna system

General Performance		
Turn-on time	≤5min(from unpack to end point)	
Search/ Collection	Search SAT time ≤3min,Collection time≤3min(from the disassembly to packing completion)	
Antenna Type	Plate feed,Tx Rx, A total of two block	
Equivalent Diameter	0.6m	
Operate Mode	Az&El Automatic 、 Pol Manual	
Control Mode	Wired / wireless PC, Wireless terminal,One-Keys	
Location	Standard configuration: the on board GPS + automatic retrieval call the built-in longitude database	
Mode	Optional configurations: automatic retrieval call GPS compass mode + built-in longitude database	
RF Performance (Ku)		
Name	Tx	Rx
Frequency	14.00~14.50 GHz	12.25~12.75 GHz
System gain	36.2+20log(f/14.25) dBi	35.0+20log(f/12.25) dBi
VSWR	1.25:1	1.25:1
Feed Interface	WR-75	WR-75
Polarization Discrimination	On axis ≥35dB, Off axis 1dB≥30dB	

Polarization	Linear
First Side Lobe	$\leq -14\text{dB}$
Side lobe Envelope	Meet in the Tx band: peak side lobe level 90% of the total does not exceed the envelope: $29-25\lg\theta$ dBi $\alpha \leq \theta \leq 48^\circ$ -10 dBi $48^\circ \leq \theta$
G/T	$\geq 14.5\text{dB/K}$ (Sunny、sunny 20°E1、Frequency 12.25GHz)
Mechanical Performance	
Azimuth Range	$\pm 90^\circ$ continues
Elevation Range	$5^\circ \sim +90^\circ$ continues
Polarization Range	$\pm 95^\circ$ continues
Size	795×518×393mm
Net Weight	≤ 21 kg (Not include BUC、LNB and case)
Power Supply Requirements	
Antenna Power Supply	90~264VAC、47~63Hz, or 127~370VDC。
BUC Power Supply	Antenna internal power supply
overall power consumption	$\leq 70\text{W}$ (Peak power, no include BUC)
External Interface	
Host Power Supply	3 Core waterproof air plug×1
Network Control	7 Core waterproof air plug×1

