China Starwin 5.3M Earth Station Antenna Datasheet

Performance Strength

* C, Ku, multi band Available, meeting FCC and ITU-RS-580 requirements
* High quality aluminum reflector panels and galvanized steel backup structure
* Self-aligning aluminum antenna reflector-no field alignment
* Galvanized steel elevation over azimuth pedestal
* Fixed foundation and Non penetrating foundation optional for wider choice
* Survives 125 mph winds in any position and High wind configuration optional

Description

China Starwin 5.3m antenna delivers exceptional high performance for transmit/receive application in C, Ku, ka, X band in Tx/Rx 2 ports, 4 ports or Rx 1 port with high gain, low noise and low microwave interference.

China Starwin 5.3m antenna offers a fine reflector design with a stretch formed double contoured panels, strong back struts and hub for easy of field alignment. The standard designed azimuth over elevation pedestal provides a cost-effective solution for ground or roof installation with high stiffness and stability, full orbital arc coverage and fine drive performance, and ensures the pointing and tracking accuracy.

The electrical performance is compliant with FCC and ITU-RS-580 sidelobe specifications and Intelsat, Eutelsat, INMARSAT, ASIASAT, APT and CHINASAT, etc requirement.

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Key Features

* Meets or exceeds CCIR 580 and INTELSAT Requirements
* High G/T, excellent pattern characteristic
* Precision compression molded offset antenna
* CP/LP switchable feed
* Hot dip zinc steel pedestal, hub & back struts
* Galvanized stainless steel fasteners
* Foundation hardware kit provided
* Package suitable for air, ocean land transportation

Antenna Accessory

* Limit Switches
* Foundation hardware Kit
* Grounding Kits Cable - Mounting kits
* Cable mounting kits
* ODU Support Kits
* Factory Feed System Testing and Documentation
* Ocean /Air/land Transport Packing

Options

* L, S, C, X, Ku and DBS-band feed configurations
* 800MHz bandwidth is available
* Two or Four ports -Tx/Rx port in linear or circular polarized feeds
* Motorization kits
* Feed blower or deicing with automatic controls
* Lightning Rod Kits
* Non-penetrating mount
* Antenna control & tracking system for step track, program track, inclined orbit track
* Integrated LNB or LNA systems
* HPAs, converters and M&C systems
* Integrated LNB or LNA systems
* HPAs, converters and M&C systems
* Turnkey installation & testing

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Electrical, Mechanical, Environmental Specification

Electrical Specification

Type		SW53C		SW53K	
Operating Frequency, GHz		C band		Ku band	
		Receive	Transmit	Receive	Transmit
		3.4~4.2	5.85~6.725	10.95~12.75	13.75~14.5
Gain, Mid-band, dBi		45.1	48.7	54.5	56
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 4-Port Feed	1.30/1.06	1.09/1.06		
VSWR		1.25	1.25	1.25	1.25
Antenna Noise Temperature 2-port feed 10° Elevation 30° Elevation 50° Elevation		 32°K 24°K 21°K		 51°K 41°K 38°K	
Typical G/T (EL=25°, 2-port)		27.6 dB / K (30ºLNA)		34.3 dB / K (70ºLNA)	
-3 dB Beam Width, Mid-band		0.98º	0.64º	0.31º	0.27º
Tx. Power Capability, KW			5		2
Feed Interface		CPR—229G	CPR—137G	WR-75	WR-75
Feed Insertion Loss, dB		0.2	0.2	0.25	0.2
Isolation, Tx to Rx, dB		90		85	
Side lobe		CCIR580-4			

Mechanical Specification

Antenna Diameter		5.3m
Antenna Type		Ring Focus
Surface Accuracy (RMS)		≤0.5mm
Antenna Pointing Range	Azimuth Elevation Polarization	±85° 0°~90° (Continuous) ±90° (Continuous)

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Drive Mode		Manual or Motorized
Motor Drive System	Azimuth Travel Rate Elevation Travel Rate Polarization Travel Rate	0.2°/S(0.04°/S) 0.2°/S(0.04°/S) 1°/S
Antenna Reflector Material		Aluminum Alloy
Finish of steel parts		Hot dipped Zinc

Environmental Specification

Operational Wind	72km/h gusting to 97km/h
Survival Wind	216km/h
Temperature	-40°C~+60°C
Relative Humidity	100%
Solar Radiation	1135Kcal/h/m²
Seismic (Survival)	0.3g(H), 0.15g(V)
Ice Loading	13mm Operational; 25mm Survival

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