

China Starwin 3.7M EARTH STATION ANTENNA DATASHEET



(Fixed foundation)



(Non penetrating foundation)

Performance Strength

- *High quality aluminum reflector panels and galvanized steel backup structure
- *C,KU, KA, X BAND Available , meeting FCC and ITU-RS-580 requirements
- *Galvanized steel elevation over azimuth pedestal
- *Fixed foundation and Non penetrating foundation optional for wider choice
- *Survives 125 mph winds in any position

Description

China Starwin 3.7m antenna delivers exceptional high performance for transmit/receive application in C ,Ku, ka, X band in Tx/Rx 2 port or Rx 1 port with high gain ,low noise and low microwave interference.

China Starwin 3.7m antenna offers a fine reflector design with a stretch formed double contoured panels, strong back struts and hub fore ease 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.

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 -Tx/Rx port in linear or circular polarized feeds
- * motorization kits
- * Feed blower or deicing with automatic controls
- * Lightning Rod Kits
- * Non-penetrating mount
- * 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	SW37C		SW37K	
Operating Frequency, GHz	C band		Ku band	
	Receive	Transmit	Receive	Transmit
	3.4~4.2	5.85~6.725	10.7~12.75	13.75~14.5
Gain, Mid-band, dBi	42.2	45.4	51.4	52.7
Polarization	Linear /circular		Linear	
XPD(on Axis), dB	35	35	35	35
XPD across 1dB Beam Width, dB	33	33	33	33
Axial Ratio/2-PortFeed (Circular-Polarized)	1. 30	1. 09		
VSWR	1.25	1.25	1.25	1.25
Antenna Noise Temperature 2-port feed				
10° Elevation	35°K		49°K	
30° Elevation	29°K		39°K	
50° Elevation	25°K		35°K	
G/T (EI > 10°)	24dB/°K (30°LNA)		30.6dB/°K (70°LNA)	
-3 dB Beam Width, Mid-band	1.25°	0.82°	0.44°	0.38°
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	
First Side lobe	-14		-14	
90% Peaks under Following Envelop	29-25log θ (1°≤ θ < 20°)		29-25log θ (1°≤ θ < 20°)	

Mechanical Specification

Antenna Diameter		3.7m
Antenna Type		Ring Focus
Surface Accuracy (RMS)		≤0.5mm
Antenna Pointing Range	Azimuth Elevation Polarization	0°~180°, 0°~90° ±360°

Drive Mode		Manual or Motorized
Motor Drive System	Azimuth Travel Rate	0.11°/S(0.03°/S)
	Elevation Travel Rate	0.17°/S(0.04°/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°~+60°
Relative Humidity	100%
Solar Radiation	1135Kcal/h/m ²
Seismic(Survival)	0.3g(H), 0.15g(V)
Ice Loading	13mm Operational; 25mm Survival

Special Ku band

Type	SW37K	
Operating Frequency, GHz	SKu band	
	Receive	Transmit
	10.95~11.7	13.0~13.25
Gain, Mid-band, dBi	51.0	52.3
Polarization	Linear	
VSWR	1.25	1.25
Antenna Noise Temperature		
2-port feed		
10° Elevation	54°K	
30° Elevation	44°K	
50° Elevation	40°K	
G/T (EI > 10°)	30.1dB/°K (70°LNA)	
-3 dB Beam Width, Mid-band	0.44°	0.38°
Tx. Power Capability, KW		2
Feed Interface	WR-75	WR-75
Feed Insertion Loss, dB	0.25	0.2
Isolation, Tx to Rx, dB	85	
First Side lobe	-14	

90% Peaks under Following Envelop	$29-25\log\theta(1^\circ \leq \theta < 20^\circ)$
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Electrical, Mechanical, Environmental Specification

Electrical Specification

Type	SW37C		SW37K	
Operating Frequency, GHz	C band		Ku band	
	Receive	Transmit	Receive	Transmit
	3.4~3.65	6.425~6.725	10.7~10.95	13.0~13.25
Gain, Mid-band, dBi	40.8	46.2	50.5	52.3
Polarization	Linear /circular		Linear	
XPD(on Axis), dB	35	35	35	35
XPD across 1dB Beam Width, dB	33	33	33	33
Axial Ratio/2-PortFeed (Circular-Polarized)	1. 30	1. 09		
VSWR	1.25	1.25	1.25	1.25
Antenna Noise Temperature				
2-port feed				
10° Elevation	38°K		47°K	
30° Elevation	32°K		42°K	
50° Elevation	29°K		34°K	
G/T (EI > 10°)	23.5dB/°K (30°LNA)		30.1dB/°K (70°LNA)	
-3 dB Beam Width, Mid-band	1.5°	0.86°	0.51°	0.42°
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	
First Side lobe	-14		-14	
90% Peaks under Following Envelop	$29-25\log\theta(1^\circ \leq \theta < 20^\circ)$		$29-25\log\theta(1^\circ \leq \theta < 20^\circ)$	

Mechanical Specification

Antenna Diameter	3.7m
Antenna Type	Ring Focus
Surface Accuracy (RMS)	≤0.5mm

Antenna Pointing Range	Azimuth Elevation Polarization	0°-180° 0°~90° ±360°
Drive Mode		Manual or Motorized
Motor Drive System	Azimuth Travel Rate Elevation Travel Rate	0.11°/S(0.03°/S) 0.17°/S(0.04°/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°~+60°
Relative Humidity	100%
Solar Radiation	1135Kcal/h/m ²
Seismic(Survival)	0.3g(H), 0.15g(V)
Ice Loading	13mm Operational; 25mm Survival

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Electrical, Mechanical, Environmental Specification

Electrical Specification

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Operating Frequency, GHz	C band		Ku band	
	Receive	Transmit	Receive	Transmit
	4.5~4.8	6.7~7.1	10.7~12.75	13.75~14.5
Gain, Mid-band, dBi	43.2	46.4	51.4	52.7
Polarization	Linear /circular		Linear	
XPD(on Axis), dB	35	35	35	35
XPD across 1dB Beam Width, dB	33	33	33	33
Axial Ratio/2-PortFeed (Circular-Polarized)	1. 30	1. 09		
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