



## China Starwin 2.4M EARTH STATION ANTENNA DATASHEET



### 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 2.4m 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 2.4m antenna offers a fine reflector design with a stretch formed double contoured panels, strong back struts and hub for 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



## Electrical, Mechanical, Environmental Specification

### Electrical Specification

Type	SW24C		SW24K	
Operating Frequency, GHz	C band		Ku band	
	Receive	Transmit	Receive	Transmit
	3.625~4.2	5.85~6.725	10.95~12.75	13.75~14.5
Gain, Mid-band, dBi	38	41.5	47.8	49.1
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)	1.3	1.09		
VSWR	1.25	1.25	1.25	1.25
Antenna Noise Temperature 2-port feed				
10° Elevation	32°K		48°K	
30° Elevation	24°K		38°K	
50° Elevation	20°K		34°K	
-3 dB Beam Width, Mid-band	2°	1.38°	0.67°	0.59°
Typical G/T ( EI > 10°)	20dB/K° (30°LNA)		27.1dB/K° (70°LNA)	
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 90% Peaks under Following Envelop	-14 29-25logθ(1°≤θ<20°)		-14 29-25logθ(1°≤θ<20°)	

### Mechanical Specification

Antenna Diameter		2.4m
Antenna Type		Ring Focus
Surface Accuracy (RMS)		≤0.35mm
Antenna Pointing Range	Azimuth	0°~360°(Continuous)
	Elevation	0°~90°(Continuous)
	Polarization	±90°(Continuous)
Drive Mode		Manual or Motorized



Motor Drive System	Pointing accuracy (El. and Az.) Max Speed in El. and Az. Axes	0.01° 10° /sec
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 <sup>2</sup>
Seismic(Survival)	0.3g(H), 0.15g(V)
Ice Loading	13mm Operational; 25mm Survival

## Insat C Band

### Electrical, Mechanical, Environmental Specification

#### Electrical Specification

Type	SW24C		SW24K	
	C band		Ku band	
	Receive	Transmit	Receive	Transmit
Operating Frequency, GHz	4.5~4.8	6.725~7.025	10.95~12.75	13.75~14.5
Gain, Mid-band, dBi	39.5	42.3	47.8	49.1
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)	1.3	1.09		
VSWR	1.25	1.25	1.25	1.25
Antenna Noise Temperature 2-port feed				
10° Elevation	32°K		48°K	
30° Elevation	24°K		38°K	
50° Elevation	20°K		34°K	
-3 dB Beam Width, Mid-band	2°	1.38°	0.67°	0.59°
Typical G/T ( El>10°)	20dB/K° (30°LNA)		27.1dB/K° (70°LNA)	



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Feed Insertion Loss, dB	0.2	0.2	0.25	0.2
Isolation, Tx to Rx, dB	90		85	
First Side lobe 90% Peaks under Following Envelop	-14 29-25log $\theta(1^{\circ}\leq\theta<20^{\circ})$		-14 29-25log $\theta(1^{\circ}\leq\theta<20^{\circ})$	

### Mechanical Specification

Antenna Diameter		2.4m
Antenna Type		Ring Focus
Surface Accuracy (RMS)		$\leq 0.35\text{mm}$
Antenna Pointing Range	Azimuth	0°~360°
	Elevation	0°~90°(Continuous)
	Polarization	$\pm 360^{\circ}$ (Continuous)
Drive Mode		Manual or Motorized
Motor Drive System	Azimuth Travel Rate	0.30°/S(0.06°/S)
	Elevation Travel Rate	0.20°/S(0.04°/S)
Antenna reflector Material		Aluminum Alloy
Finish of steel parts		Hot dipped Zinc

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