

SA-6.2T C/Ku



1. Summary

The satellite communication antenna SA-6.2T C/Ku is ring focus designed. The antenna diameter is 6.2 meter, and the antenna mount is the type of A-E joist style. It is the new generation satellite communication antenna station researched and developed by us in 1995. This antenna adapts front-side shaped designing, with efficient feed, the reflector, the antenna mount and the driving structure all have the features of high precision and robustness.

It has very fine performance in radiation, high precision and since it was introduced to the market in 1996, the antenna has received very good feedback from customers and users.

2. Main Technical Parameters

2.1 Electrical Specification

Electrical Specification	C-Receive	C-Transmit	Ku-Receive	Ku-Transmit
Frequency (GHz)	3.625~4.200	5.85~6.425	10.95~12.75	14.00~14.50
Gain(dBi)	46.8	50.2	55.9	57.2
Voltage Standing Wave Ratio	1.25 : 1	1.25 : 1	1.25 : 1	1.25 : 1
Beamwidth-3dB	0.81°	0.53°	0.27°	0.23°

-15dB	1.62°	1.07°	0.54°	0.46°
Noise Temperature	2/4 Port Feed		2/4 Port Feed	
10° E1	35/42K		63/73K	
20° E1	26/36K		51/61K	
40° E1	24/33K		49/59K	
Power Capacity		5000W		1000W
Interface	CPR-229G	CPR-159G/137G	WR-75	WR-75
Insertion Loss of Feed	0.25dB	0.2dB	0.4/0.45dB	0.4dB
Isolation				
Tx-Rx	85dB	85dB		
Linear pol.	30dB	30dB	30dB	30dB
Circular pol. Isolation	21dB	21dB		
Cross pol.	35dB(on axis)	35dB(on axis)	35dB(on axis)	35dB(on axis)
Axial Ratio	1.8/0.5dB	1.8/0.5dB		
Sidelobe Envelope	CCIR.580-2	CCIR.580-2		

2.2 Mechanical Specification

Mechanical Specification	Parameter	Remark
Travel of Azimuth	$\pm 90^\circ$	Continuously
Travel of Elevation	$5^\circ \sim 90^\circ$	Continuously
Tracking Mode	Automatic&manual	
Surface Accuracy	<0.5mm (RMS)	

2.3 Environmental Specification

Environmental Specification	Parameter
Operational Wind Speed	72Km/h~97Km/h
Survival Wind Speed	200K/h
Humidity	10%~98%
Temperature	-45℃~+60℃
Anti-Seismic Capacity	Horizontal: 0.3G's Vertical: 0.15G's
Ice thick	13cm

3. Detailed equipment list

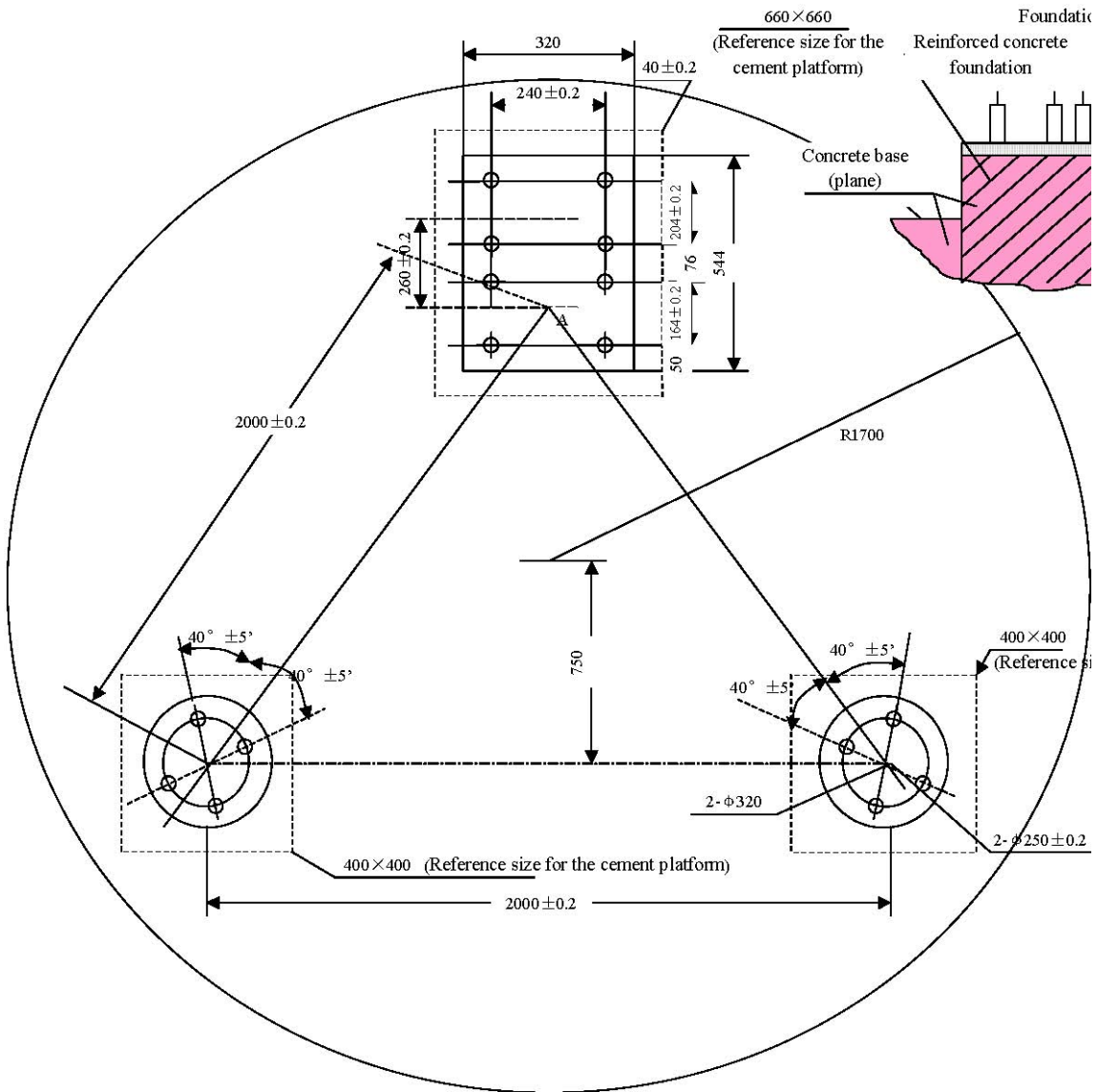
NO.	Component name	Description	Qty.
1	Antenna Head	Mainreflector、radiate grider、drawing pole	16
		Hub	1
		Subreflector	1

2	Feed System	Feed horn&sleeve	1	
		575Mhz Network	1	
3	Pedestal	Seat	A-E Bearing System	1
			Anterior&latter branch pole	Each of 2
			Mast	1
		Beam	1	
		Azimuth&elevation drive system	Electrical machinery、retarder	Each of 1
			Leading screw support、sheath	Each of 1
		Azimuth&elevation Synchronous spacing device	Each of 1	
4	Foundation parts	Template、 anchor blots	1	
5	Spare parts		1	
6	Install tool		1	
7	User Manual		1	

4. Technical Requirements

Technical Requirements for Foundation Construction of 6.2-meters Antenna

1. The centers A, B, and C of the three cement platforms of the foundation form an equilateral triangle with a side length of $2000\pm 0.2\text{mm}$. The three cement platforms are within the same plane with an inequality allowance less than 1.5mm. Relative positions of foundation bolts on the cement platform are shown as the diagram. The construction of the foundation must be carried out strictly in accordance with the size requirements of the drawing. Foundation bolts should remain parallel to each other and vertical to the plane of the cement platform.
2. The cement platform and the whole foundation use single-casting to take shape. Each platform can bear 16-ton pull force and pressure and 10-ton horizontal force. There should be no non-uniform settlement for long-term use.
3. Cement platform A is the front direction of the antenna, while B and C are the back direction. All the three cement platforms should be 80~150mm higher than the basic plane.
4. Within the range of the installation and operation of the antenna, there should be no obstacles and shelters. There should be lightning protection device installed on building top or high land.
During construction on the flat, the basic plane should be made a circular cement plane and the cement platforms stand in the center of it. The size of the circular plane in the diagram is only for reference.



5. Packing List

Number of Package Box: 8-1 Box Material : Wood/Chipboard

Gross Weight: 240kg Size: **3.5 × 0.9 × (high1.5, low0.35)m**³

NAME	QTY	MATERIAL	COAT
Reflector	8 Pieces	Alloy Aluuminum	Spray-paint
Sub- reflector bearing rod	2 Pieces	Steel	Galvanized
Lid	1 Piece	Alloy Aluuminum	Spray-paint

Number of Package Box: 8-2 Box Material : Wood/Chipboard

Gross Weight: 240kg Size: **3.5 × 0.9 × (high1.5, low0.35)m**³

NAME	QTY	MATERIAL	COAT
Reflector	8 Pieces	Alloy Aluuminum	Spray-paint
Sub- reflector bearing rod	2 Pieces	Steel	Galvanized

Number of Package Box: 8-3 Box Material : Wood/Chipboard

Gross Weight: 40kg Size: $1.2 \times 1.2 \times 0.7m^3$

NAME	QTY	MATERIAL	COAT
Sub- reflector	1 Piece	Aluminum	Spray-paint

Number of Package Box: 8-4 Box Material : Wood/Chipboard

Gross Weight: 350kg Size: $2.62 \times 0.77 \times 0.7m^3$

NAME	QTY	MATERIAL	COAT
Azimuth drive	1 Piece	Steel/copper	Spray-paint

Number of Package Box: 8-4 Box Material : Wood/Chipboard

Gross Weight: 350kg Size: $2.62 \times 0.77 \times 0.7m^3$

NAME	QTY	MATERIAL	COAT
Elevation drive	1 Piece	Steel/copper	Spray-paint

Number of Package Box: 8-5 Box Material : Wood/Chipboard

Gross Weight: 50kg Size: $0.95 \times 0.32 \times 0.35m^3$

NAME	QTY	MATERIAL	COAT
Polarization wheel	1 Piece	Steel/copper	Spray-paint

Number of Package Box: 8-6 Box Material : Wood/Chipboard

Gross Weight: 100kg Size: $1.1 \times 0.56 \times 0.58m^3$

NAME	QTY	MATERIAL	COAT
Feed source	1 Piece	Aluminum	Spray-paint

Number of Package Box: 8-7 Box Material : Wood/Chipboard

Gross Weight: 70kg Size: $0.95 \times 0.47 \times 0.45m^3$

NAME	QTY	MATERIAL	COAT
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Linear polarization network	1 Piece	Copper	Spray-paint
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Number of Package Box: 8-8 Box Material : Wood/Chipboard

Gross Weight: 50kg Size: $0.75 \times 0.41 \times 0.4m^3$

NAME	QTY	MATERIAL	COAT
Circular polarization network	1 Piece	Copper	Spray-paint

Number of Package Box: 8-9 Box Material : Wood/Chipboard

Gross Weight: 150kg Size: $1.1 \times 0.56 \times 0.58m^3$

NAME	QTY	MATERIAL	COAT
Outdoors servo switch control	1 Piece		Spray-paint

Number: 8-10 Gross Weight: 550kg Size: $\phi 1.95 \times 0.7m^3$

NAME	QTY	MATERIAL	COAT
Hub	1 Piece	Steel	Spray-paint

Number: 8-11 Gross Weight: 250kg Size: $0.34 \times 0.4 \times 1.1m^3$

NAME	QTY	MATERIAL	COAT
Beam	1 Piece	Steel	Spray-paint

Number: 8-12 Gross Weight: 100kg Size: $0.33 \times 0.27 \times 0.5m^3$

NAME	QTY	MATERIAL	COAT
Down-axis head	1 Piece	Steel	Spray-paint

Number: 8-13 Gross Weight: 200kg Size: $0.42 \times 0.5 \times 1.7m^3$

NAME	QTY	MATERIAL	COAT
Elevation axis	1 Piece	Steel	Spray-paint

Number: 8-14 Gross Weight: 200kg Size: $0.32 \times 0.32 \times 2.7m^3$

NAME	QTY	MATERIAL	COAT
Mast	1 Piece	Steel	Spray-paint

Number: 8-15 Gross Weight: 100kg Size: **0.22×0.2×3.3m**³

NAME	QTY	MATERIAL	COAT
Front pole	2 Pieces	Steel	Spray-paint

Number: 8-16 Gross Weight: 100kg Size: **0.22×0.2×3.3m**³

NAME	QTY	MATERIAL	COAT
Behind pole	2 Pieces	Steel	Spray-paint

Number: 8-17 Gross Weight: 100kg Size: **0.33×0.27×0.5m**³

NAME	QTY	MATERIAL	COAT	REMARK
Radiation grider	4 bundles	Steel	Spray-paint	A bundle consists of 4 pieces radiation griders

Number: 8-18 Gross Weight: 50kg Size: ϕ **0.6×0.7m**³

NAME	QTY	MATERIAL	COAT
Feed source sleeve	1 Piece	Steel	Spray-paint

Number: 8-19 Gross Weight: 100kg Size: **4.37×0.5×0.52m**³

NAME	QTY	MATERIAL	COAT
Ladder	1 Piece	Steel	Spray-paint

Note:

- 1、 Unspecified packagings are packed in basketwork.
- 2、 Labeled weight is single weight. For reference only.