

# Earth Station Antenna

## Model NS-SEC-240 2.4m Antenna

### Characteristics:

- Meets or exceeds CCIR 580 and Intelsat requirements;
- Meets Intelsat, Asiasat, Chinasat network access requirement;
- The efficiency of single band communication antenna can reach to 70%;
- High gain, Low sidelobe, High G/T rate;
- Hot-dip zinc processed steel parts, with strong corrosion resistant ability;



### Optional Characteristics:

- L band, S band, X band,C band, Ku band, Ka band, QV band, customized frequency available;
- Structure type: A+E type, A+E-T type, X-Y type.
- Rx/Tx or 2Rx/2Tx;
- Optional: Antenna servo system, NPM, BUC,LNB, Modem, spectrum analyzer, BUC support,intallation tool, cable etc.;
- Antenna color: white, silver powder,military green or specified color.

<b>RF SPECIFICATIONS</b>	<b>NS-SEC(C)-240</b>		<b>NS-SEC(Ku)-240</b>		<b>NS-SEC(Ka)-240</b>	
Frequency	3.625~4.2GHz	5.85~6.425GHz	10.95~12.75GHz	13.75~14.5GHz	17.7~21.2GHz	27.5~31GHz
Gain, dBi	37.71@3.95GHz	41.98@6.2GHz	47.26@11.85GHz	48.78@14.125GHz	51.4@19.95GHz	54.73@29.25GHz
Polarization	Circular/Linear		Linear		Linear / Circular	
Cross-pol on Axis		$\geq 30\text{dB}$			/	
VSWR	1.25:1	1.25:1	1.3:1	1.3:1		1.35:1
Axial ratio 2 port	$\leq 1.3 \text{ dB}$	$\leq 1.3 \text{ dB}$	$\leq 1.3$	$\leq 1.3$	$\leq 1.5 \text{ dB}$	$\leq 1.5 \text{ dB}$
Axial ratio 4 port	$\leq 0.5 \text{ dB}$	$\leq 0.5 \text{ dB}$	$\leq 0.75$	$\leq 0.75$	$\leq 1 \text{ dB}$	$\leq 1 \text{ dB}$
Feed insertion loss	$\leq 0.2\text{dB}$	$\leq 0.2\text{dB}$	$\leq 0.3\text{dB}$	$\leq 0.3\text{dB}$	0.6dB	0.6dB

#### **Antenna Noise Temperature**

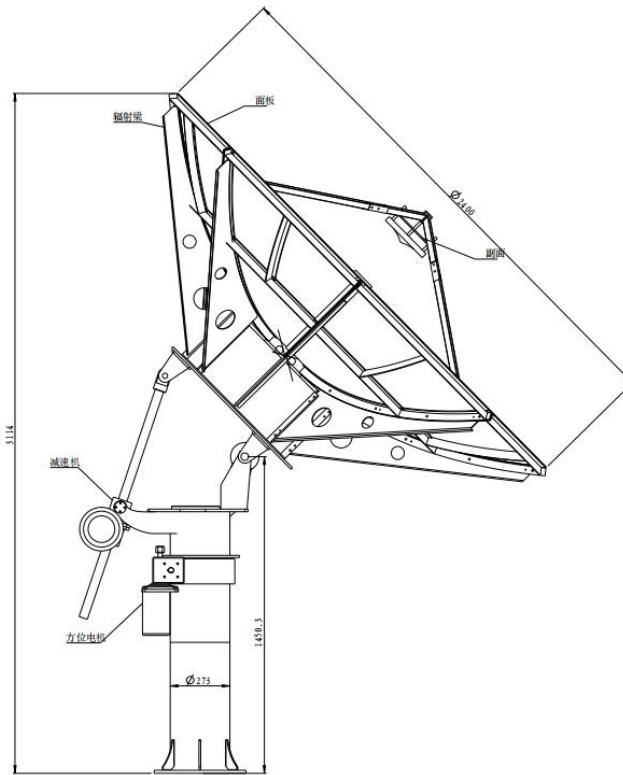
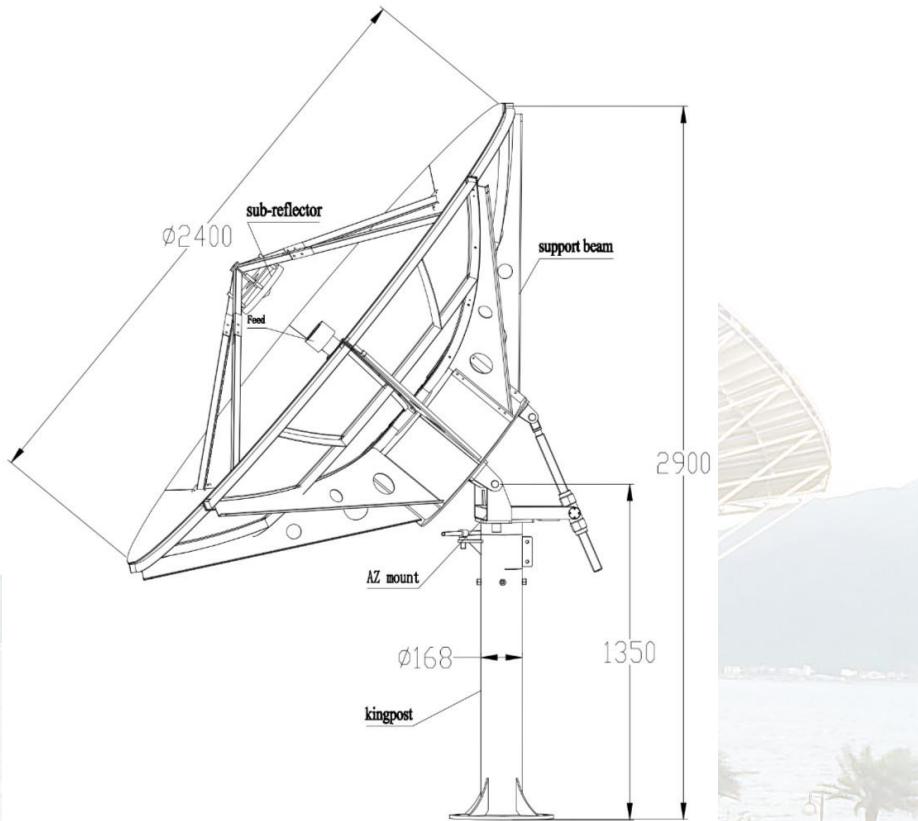
10° Elevation	50.7 K		61.2K		124.5 K	
20° Elevation	44.8K	/	50K	/	86K	/
40° Elevation	40.6 K		43K		60K	
-3dB Beam width	2.3°	1.41°	0.7°	0.63°	0.46°	0.3°
Power capacity	/	2KW	/	2KW	/	2KW
Feed interface	CPR-229G	CPR-137G	WR-75	WR-75	WR-42	WR-28
Isolation, Rx to Tx,		85 dB		85 dB		85 dB
First Sidelobe		$\leq 14\text{dB}$		$\leq 14\text{dB}$		$\leq 14\text{dB}$
90% Peaks under Following envelop		29 - 25 $\log\theta(1^\circ \leq \theta < 20^\circ)$		29 - 25 $\log\theta(1^\circ \leq \theta < 20^\circ)$		29 - 25 $\log\theta(1^\circ \leq \theta < 20^\circ)$

#### **MECHANICAL SPECIFICATIONS**

Antenna Diameter		2.4m
Antenna travel range	AZ EL Pol	5° ~355° (continuous) 5° ~90° ±90°
Antenna Type		Ring focus/center-feed
Structure		EL over AZ
Drive Mode		Manual/Motorized
Surface accuracy(R.M.S)		$\leq 0.5\text{mm}(C); \leq 0.4\text{mm}(Ku); \leq 0.3\text{mm}(Ka)$

#### **ENVIRONMENT SPECIFICATIONS**

Working wind speed	72km/h
Survival wind speed	216km/h
Humidity	100%
Ice load	Icing 13mm: normal work; Icing 25mm, no damage
Temperature	-30~50°C
Seismic capacity	Horizontal: 0.3G; vertical: 0.1G
Working wind speed	72km/h



### **Antenna package:**

Manual: total: 1 package, dimension: 2.1 CBM, net weight: 250kg, gross weight: 310kg;

Motirized: 2 packages, 2.5CBM, net weight: 300kg, gross weight: 384kg

Loading capacity: 8sets for one 20ft container; 16sets for one 40ft container.

### **Note:**

Weight and dimensions for reference only;

Can vary depends on options choosen;

Please confirm with us prior to any shipment.

## Antenna test pattern

