

## 7.3M S/Ka-band Full Motion Antenna Specification

ELECTRICAL SPECIFICATION			
Diameter	7.3M		
Operating Frequency, GHz	S-Band		Ka-Band
	Receive	Transmit	Receive
	2.20~2.30	2.025~2.120	25.5~27.0
Gain, Mid-band, dBi	$41.5+20\log(f/2.2)$	$40.8+20\log(f/2.025)$	$62.8+20\log(f/25.5)$
Polarization	Circular		Circular
VSWR	$\leq 1.3:1$		$\leq 1.3:1$
AR of CP	$<1.5\text{dB on axis}$		$<1.0\text{dB on axis}$
Antenna Noise Temperature	105K max at 5° elevation@ 23°C		150K max at 5° elevation@ 23° C
Typical G/T at 5 deg Elevation,	$\geq 19\text{ dB/}^\circ\text{K}$		$\geq 36.5\text{ dB/}^\circ\text{ K}$
Feed Interface	4-port CP feed with monopulse mode		2-port CP feed with monopulse mode
Isolation, Tx to Rx, dB	$\geq -100$		---
Radiation Pattern:First Sidelobe	Compliant with ITU-R S.580-6		
MECHANICAL SPECIFICATION			
Antenna Type	Ring-focus Antenna		
Antenna Pedestal Type	El over Az geometry full-motion Antenna		
Azimuth	$\pm 355^\circ$ continuous, gear and pinion dual-motor drive		
Elevation	$0^\circ - 180^\circ$ continuous, gear and pinion dual-motor drive		
Drive Rate	Az Axis : up to at least $10^\circ/\text{s}$ El Axis : up to at least $10^\circ/\text{s}$		
Antenna Accessorial Parts and Interface	Hot Dip Galvanise,Hempel Paint over Galvanise,Lightning Arresting Rods,Lightning Arrestor down-conductors,Foundation HW,Hub,Enclosure with door,Cable routes for servo and downlink cables,Access ladder & platform,		
Antenna Drive	Motorized		
ENVIRONMENTAL SPECIFICATION			
Steady wind	Steady wind: 47km/h,gust: 72km/h		
Survival Wind	peak gust 200km/h		
Temperature	$-20^\circ\text{ C}\sim+60^\circ\text{ C}$ (Outdoor)		
Relative Humidity	$0\%\sim 100\%$		
Seismic (Survival)	0.3g (H), 0.15g (V)		