6.2M motorized remote sensing satellite receiving antenna

6.2M motorized remote sensing satellite receiving antenna is one of remote sensing receiving antenna series developed by our company, which is applied for remote sensing satellite receiving on sea and meteorology. This type of antenna adopts ring focus shaped dual-reflector antenna, AZ-EL and tilted 3-axis antenna pedestal. Meanwhile titled axis is considered as lay-down mechanism when antenna pedestal is stowed. The car loaded the antenna is trailer. The antenna can operate at L, S or X-band； and dual-band of L/S, L/X or S/X; or can also operate at tri-band of L/S/Ku, L/X/K or S/X/Ku. Ku-band is applied for satellite communication. When tri-band operating simultaneously, the antenna adopts tri-band feed system and feed back operation. Its tracking mode has three categories which are manual tracking，program tracking and mono-pulse auto tracking. The system equipment includes antenna reflector, antenna pedestal, feed system, servo tracking system, lay-down mechanism, etc. Auxiliary equipment includes antenna trailer, tractor, calibration signal source, beacon horn, rising and falling mechanism, north finder and lightning rod, etc.

Main Performance Specification

Item	Electrical Specification	Parameter
1	Antenna type	Ring focus shaped dual-reflector antenna
2	Antenna pedestal type	AZ-EL and titled 3-axis
3	Operational band	L, S, X-band or L/S, L/X, S/X dual-band or tri-band of L/S/Ku, L/X/Ku, S/X/Ku
4	Antenna efficiency	50%~55%
5	Polarization	Circular
6	Sidelobe	First sidelobe ≤ －14dB
7	VSWR	≤1.5:1
8	Circular polarization axial ratio	1.22:1(single band) or 1.41:1(dual-band)

9	Antenna travel range	Az: ±360°El: -1°～181°　Tilt: ±7°
10	Travel speed	Az: 0.01°/S～20°/S,
		El: 0.01°/S～12°/S
		Tilt: 0.1°/S～0.2°/S
11	Travel acceleration	Az: 0.001°/S^2～5°/S^2，
		El: 0.001°/S^2～2°/S^2
12	Operational mode	Manual control, assigned position (digital guiding), program tracking, mono-pulse auto tracking, self-checking
13	Tracking mode	Manual tracking, program tracking and mono-pulse auto tracking
14	Pointing accuracy	1/6 half power beam width (X-band)
15	Tracking accuracy	1/10 half power beam width
16	Monitor and interface requirement	It can communicate with monitoring computer. The interface is RS232/422/RS485 or network interface
17	Power supply	220V AC±10％, 380V AV±10％, 50Hz±5％
18	Total antenna weight	9500Kg
19	Power	9000W