

5.4M fixed remote sensing satellite receiving antenna

5.4M fixed 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 standard Cassegrain antenna, X-Y antenna pedestal and there are different types of antenna reflectors like mesh, aluminum or aluminum with hole. The overall antenna system structure is divided into four parts which are antenna reflector, X axis, Y axis and pedestal. The antenna operates at L, S or X-band and also operates at dual-band of L/S, L/X or S/X. Its tracking mode has three categories which are manual tracking, program tracking and mono-pulse auto tracking.

Main Performance Specification

Item	Electrical Specification	Parameter
1	Antenna type	Standard Cassegrain antenna
2	Feed type	Feed forward, feed back or sub-reflector
3	Antenna pedestal type	X-Y axis
4	Operational band	L, S, X-band or L/S, L/X, S/X dual-band
5	Antenna efficiency	50%~55%
6	Polarization	Circular
7	Sidelobe	First sidelobe $\leq -14\text{dB}$
8	VSWR	$\leq 1.3:1$
9	Circular polarization axial ratio	1.22:1(single band) or 1.41:1(dual-band)
10	Antenna travel range	X axis: $\pm 90^\circ$ Y axis: $\pm 90^\circ$
11	Travel speed	X axis: $0.01^\circ/\text{S} \sim 5^\circ/\text{S}$, Y axis: $0.01^\circ/\text{S} \sim 5^\circ/\text{S}$
12	Travel acceleration	X axis: $0.001^\circ/\text{S}^2 \sim 5^\circ/\text{S}^2$, Y axis: $0.001^\circ/\text{S}^2 \sim 5^\circ/\text{S}^2$

13	Operational mode	Manual control, assigned position (digital guiding), program tracking, mono-pulse auto tracking, self-checking
14	Tracking mode	Manual tracking, program tracking and mono-pulse auto tracking
15	Pointing accuracy	1/8 half power beam width (X-band)
16	Tracking accuracy	1/10 half power beam width
17	Monitor and interface requirement	It can communicate with monitoring computer. The interface is RS232/422/RS485 or network interface
18	Power supply	220V AC \pm 10%, 380V AV \pm 10%, 50Hz \pm 5%
19	Total antenna weight	3900Kg (designed on basis of antenna radome inside)
20	Power	13000W (designed on basis of antenna radome inside)

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