

LOW/MEDIUM EARTH ORBIT SATELLITE TRACKING ANTENNA



→ Features

- 2.4 meter to 7.3 meters antenna size
- L, S, X, C, Ku, Ka, Q and V band capabilities
- Transmit/receive feed technologies through S+X-band
- X/Y axis configuration (Type 1 through Type 4 for increasingly larger dishes)
- X/Y-axis rotation pedestal non-ballasting technology
- Designed for tracking LEO, MEO, HEO and GEO spacecraft
- Applications include Earth Observation, Remote Sensing, Communications and TT&C functions
- Program and Auto Track Performance, Lights-out operation, including ethernet (TCP/IP) and M&C software is provided
- Effective program track capabilities that utilize ephemeris data in the form of Two-Line Element (TLE) data and other formats
- Low loss mono-pulse mode coupler tracking system available, for high frequencies and larger aperture antennas

Model	DH 2.4 Meter DR X-band Antenna DH 3.7 Meter DR S+X Dual-band Antenna	
Mechanical		
Aperture Size	2.4 meter	3.7 meter (5.9 meter Radome)
Program Tracking Accuracy	< 0.09°rms	< 0.07°rms
Pedestal + Dish Weight	1500kg	< 1700kg,
Mount	Type1, Type 2, Type3, Type4 Available	
Pedestal Configuration	X/Y-axis Rotation Pedestal	
Reflector Material	Light aluminum+steel, / Full light aluminum	
Range of Motion	X-axis: -90° +90° (zero towards the sky, independent rotation) Y-axis: -90° +90° (zero towards the sky, independent rotation)	
Speed Range	X-axis Angular Velocity: 0.01° 10°/s Y-axis Angular Velocity: 0.01° 10°/s	
Backlash Travel	< ±1 (arc minute)	
Encoder Resolution	≤0.005°	
Servo Position Resolution	≤0.01°	
Pointing Accuracy	S and X frequency bands are better than 1/6 half power beamwidth	
RF		
Feed Configuration	Prime Focus and Ring-focus, Dichroic Subreflectors	
Frequency Range	9.3~9.7 Ghz (Downlink)	8.025~8.4 Ghz (Downlink) 2.2 2.3~GHz (Downlink) 2.025~2.1 Ghz (Uplink)
Gain(dB)	45 dBi	X-band 47.63 dBi S-band 35.38 dBi
Beamwidth/-3dB	0.9~1.0°	0.6° / 2.4°
Main-beam matching error	< 0.1°	< 0.1°
VSWR	≤1.5:1	≤1.5:1
Polarization	V-/H- Pol.	LHCP/RHCP
Axial Ratio		X-band<0.8dB S-band<1.2dB
Cross Pol. Isolation	35 dB	
Tx/Rx Isolation	80dB	80dB
Antenna Noise Temperature	Ta<77K	X-band Ta<85K S-band Ta<130k
Feed Interfaces	X-band WR112	X-band WR112 S-band N-Type
First Sidelobes	X-band ≤27 dB S-band ≤27 dB	
Sidelobe Level	25 dB @ 2.5 degrees main beam 40 dB @ 5.0 degrees main beam	