

4.5 Meter Dual-Reflector Earth Station Antennas System

X- (Military/WGS), C-, or Ka-Band Capabilities

Description

Type: DH 4.5 Meter DR Ku-band Antenna

4.5 Meter Dual-Reflector Earth Station Antenna Reflector incorporates stretch-formed doubly contoured panels with matched radials and hub for ease of field alignment. The standard designed azimuth over elevation pedestal provides a cost-effective for high stiffness and stability, full orbital arc coverage and fine drive performance, and ensures the pointing accuracy required for Ku-band operation.

RF specifications can meet FCC 25.209, IESS and ITU-RS.580-5, INMARSAT, ASIASAT, INTELSAT, APT and Chinasat, etc.

Key Features

- Wide-band High RF performance, LP adjustable feed
- Galvanized steel parts/ Hot Dipped Galvanized
- Type approval from: Intelsat/Asiasat/APT/Chinasat
- Turning Head Pedestal El-over Az axis with jackscrew drive.
- 130km/h gusts to 200km/h High Operation Wind Option.
- Different frequency ranges from many feed configurations



RF & Antenna Specifications

Ku-band Linear	Receive	Transmit
Frequency, GHz	10.95-12.75	13.75-14.5
Mid-Band Gain, dBi	53.2	54.5
VSWR	1.25:1	1.25:1
3dB Beam Width, deg	0.35	0.3
Noise Temperature		
10 Deg Elevation, K	51	
20 Deg Elevation, K	48	
Typical G/T @ 10 Degrees	32.4	
Port to Port Isolation		
Tx to Rx (same band),dB		85
Tx Power Capability, KW		2
Cross-pol. on Axis, dB	35	35
Insertion Loss, dB	0.30	0.25
Feed Interface	WR-75 CPR	WR-75 CPR
Radiation Pattern Compliance	FCC 25.209, ITU-RS.580-6,	
First sidelobe, dB	≤ -14	
Sidelobe Envelope	32 - 25 log (1° ≤ θ < 20°)	

Mechanical Specifications

Antenna Optics	Ring- focus design
Reflector Aperture	4.5 Meters (14.7 Feet)
Reflector Panels	12 precision-formed aluminum panels
Antenna Foundation	Reinforced Concrete Foundation, or Non-penetrating mount (NPM)
Mount Configuration	Turning Head Pedestal Elevation-over Azimuth axis configuration
Drive Type	Manual / Motorized jack screw
Surface Accuracy (RMS)	0.5 mm
Finishes	Aluminum panels with high-diffusing white paint
Reflector Surface	
Pedestal & Reflector Backup Structure	Galvanized steel parts/ Hot Dipped Galvanized After Fabrication Galvanized
Elevation Travel	0° to 90° Continuous,
Azimuth Travel	± 85° or 360° Continuous,
Pol. Travel	± 90° Continuous,

Environmental Performance

Operational Wind	45 mph (72 km/h) gusting to 60 mph
High Wind(option)	(97 km/h)
Survival Wind	125 mph (200 km/h),
Temperature	-40° C to +50° C
Humidity	0-98%