



3.8M EARTH STATION ANTENNA

C Band / Ext C Band / Ku Band

The 3.8Mtr earth station antenna is designed for high structural stability & pointing accuracies. The antenna can be used as Rx and Tx/Rx applications in C/Ext C/Ku Bands.

The antenna has an elevation and azimuth type of mount, to allow for easy pointing to any visible satellite within the Geo-Stationary arc. The antenna has 110 continuous coverage in Azimuth, extendable to 180 in 2 positions. The antenna withstands wind load 100kmph and 200kmph survival.



The antenna reflector is of dual shaped cassegrain configuration emplaning corrugated conical feed horn and sub-reflector, and meets the gain and side lobe specifications of International standards ITU-RS-580.

The reflector panels are stretch formed to give surface accuracies below 0.3mm RMS, antenna efficiency 65 to 70%. 16 no's of high strength doubly curved aluminum stretch formed panels on 16 no's radial trusses emanating from a center hub constitutes the reflector. The hub can house Receive/ Transmit electronics

Options:

- ❖ 2Port / 4 port Linear / Circular feed
- ❖ De-icing for Reflector and feed
- ❖ Step Tracking mechanism using antenna control system & Beacon Receiver and Motor Controller.
- ❖ Polarization controller incorporated in A.C.U
- ❖ Turnkey Installation, Commissioning including Civil Foundation.

ELECTRICAL

Frequency of operation	Rx (Ghz)	Tx (Ghz)
C – Band	3.625 – 4.2	5.85 – 6.425
Ext – C Band	4.5 – 4.8	6.725 – 7.025
Ku - Band	10.700 – 12.750	13.75 – 14.5
Antenna Gain dBi (Mid Band)	Rx (dBi)	Tx (dBi)
C – Band	42	45.5
Ext – C Band	43	46
Ku - Band	51.3	53
G / T (Typical)		
C – Band	23.0 dB / °K with 35°K LNA	
Ext – C Band	24.5 dB / °K with 35°K LNA	
Ku – Band	30.0 dB / °K with 70°K LNA	
Cross pol Discrimination	>30dB (on axis)	
VSWR	1.30 : 1	
Polarisation	Linear / Circular	

MECHANICAL

Feed Type	Prime Focus	Off-Set	Gregorian
Reflector Material	Al Alloy B51SWP HE 30	Glass Fiber Reinforced Plastic	Al Alloy HE30
Center Hub, Mount & Non Penetrating Mast	Steel Galvanised	Steel Galvanised	Steel Galvanised
Antenna Optics	12 panels on 12 Trusses	4 panels on 8 Trusses	12 panels on 12 Trusses
Azimuth Adjustment	360° Continuous	Fine adj ± 20°	360° fine ± 20°
Elevation	0° - 90° Continuous	-----	0° - 90° Continuous

ENVIRONMENTAL

Wind loading	Operational 80 Kmph
Survival Winds	200 Kmph
Temperature	-40° to + 60° C
Rain	100 mm/hr
Humidity	100%
Atmospheric Conditions	Salt, Pollutants as encountered in Coastal and Industrial areas.