

# 7.5 M EARTH STATION ANTENNA

## C Band Model No: 754PCCPCM

The 7.5 Mtr earth station antenna is designed for high structural stability & pointing accuracies. The antenna can be used as Rx only and Tx/Rx applications in C/Ext C/Ku Bands.

The Full coverage antenna has an elevation over azimuth type of mount, to allow for easy pointing to any visible satellite within the Geo-Stationary arc. The antenna has Turning Head Mount for 360° continuous rotation in Azimuth and 0° -90° in Elevation. The antenna withstands wind load 100kmph and 200kmph survival.

The antenna reflector is of dual shaped cassegrain configuration corrugated conical feed horn and sub-reflector, and meets the gain and side lobe specifications of International standards ITU-RS-580-6.

The reflector panels are stretch formed to give surface accuracies below 0.3mm RMS, antenna efficiency better than 60%. 16 nos of high strength doubly curved aluminium stretch formed panels on 16 nos 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 ACU
- ❖ Turnkey Installation, Commissioning including Civil Foundation.





## ELECTRICAL

Antenna Optics	Shaped Parabolic Cassegrain system		
Feed Type	Composite, Conical Horn Feed & Sub – Reflector		
Feed options	Feed - 2 Port / 4 Port Linear / Circular Feed in C / Ext - C / Ku Band. Composite C / Ku Band Rx only.		
Frequency of operation	Rx ( Ghz )	Tx ( Ghz )	
C – Band	3.625 – 4.2	5.85 – 6.450	
Antenna Gain dBi (Mid Band)	Rx ( dBi )	Tx ( dBi )	
C – Band	47.8	51.3	
G / T ( Typical )			
C – Band	28.0 dB / °K with 35°K LNA		
Cross pol Discrimination	>30dB Min		
VSWR	1.30 : 1		
Tx to Rx Isolation	90 dB with TRF		
Feed Rotation	Motorized Drive		

## MECHANICAL

Azimuth Travel	±360° Continuous with Slewing Ring Bearing
Elevation Travel	5° - 90°
Az Travel Rate	0.4°/Sec
EL Travel Rate	0.2°/Sec
Polarisation Travel	±95°
Feed Rotation	± 190° Min
Weight of Reflector	2 Tonnes
Weight of Pedestal	2.5 Tonnes
Reflector Structure	Aluminium Alloy
Mount Structure	Steel ( Galvanised )

## ENVIRONMENTAL

Operational Winds	70 Kmph gusting to 100 Kmph
Survival Winds	200 Kmph
Ambient Temperature	- 15° to + 50° C
Rain	Upto 100 mm/hr
Humidity	100%
Atmospheric Conditions	As encountered in Marine / Industrial