



COMSAT SYSTEMS PVT LTD

An ISO 9001 Company

3.8 M Earth Station Antenna / VSAT

C Band / Ext C Band / Ku Band



The 3.8 Mtr. Antenna System can be used as Receive Only / Rx-Tx in a wide applications. The Antenna is used as VSAT for DAMA, TDMA applications in C, Ext C & Ku Bands and as Hub station to support number of VSATs. The Reflector comes in 3 versions. First one is a Prime Focus Aluminium reflector with prime focus feed, the Second one with Gregorian feed and the Third one offset type with 4 segment GFRP reflector. The Antenna mount also comes in 2 versions, penetrating type, mostly used in Ground installations and the other Non-penetrating type, which can be mounted on the roof tops or on the ground. Cement concrete ballast of about 2000 Kgs are to be placed over the base to resist uplift forces. For Hub Applications, Gregorian configuration is supplied which has high efficiency and better performance over the normal VSAT Antennas.

Options:

- Feed : Prime focus / Offset / Gregorian.
- Motorisation.
- Manual Step Track Controller.
- Step Track Mechanism using Antenna Control System, Beacon Receiver and Motor Controller.
- Transportable Version available.
- Turnkey Installations, Commissioning including Civil Foundation.

SPECIFICATIONS



Electrical

Antenna Size	: 3.8 Mtr.		
Frequency of operation	: Rx(GHz)	Tx(GHz)	
	3.625 - 4.2	5.850 - 6.425	
	4.5 - 4.8	6.725 - 7.025	
	10.95 - 12.75	14.00 - 14.5	
Antenna Gain (Mid Band) dBi	0.5dBi	Rx	Tx
		41.4	45.0
	C Band	43.0	46.0
	Ext C Band	51.0	52.5
	Ku Band		
G/T	: C Band	22.5 dB/°K with 35°K LNA	
	Ext C Band	24 dB/°K with 35°K LNA	
	Ku Band	30 dB/°K with 70°K LNA	
Polarisation	: Linear/Circular		
Feed Interface	: C Band CPR 229G - Rx , CPR 137G - Tx or N connector		
	Ku Band - WR 75 Flat		
Side lobe Envelope	: $1^\circ \leq \theta \leq 20^\circ$: 29 - 25 log θ		
	$20^\circ \leq \theta \leq 26.3^\circ$: 3.5 dBi		
	$20.3^\circ \leq \theta \leq 48.0^\circ$: 32 - 25 log θ dBi		
Cross Pol. Discrimination	: > 30dB (on axis)		
VSWR	: 1.30 :1		
Radiation Pattern	: As per ITU - R.S.580-5		

Mechanical

	Prime focus	Off-set	Gregorian
Reflector Diameter	: 3.8 Mtr	3.8 Mtr	3.8 Mtr
Reflector Material	: Al Alloy B51SWP HE 30	Glass Fibre Re-inforced Plastic	Al Alloy HE 30
Feed	: Prime focus	Off-set	Gregorian
Center Hub	: Steel Galv.	Steel Galv.	Steel Galv.
Mount & Non -penetrating Mast	: Steel Galv.	Steel Galv.	Steel Galv.
Antenna Optics	12 Panels on 12 Trusses	4 Panels on 8 Trusses	12 Panels on 12 Trusses
Azimuth adjustment	: 360° Continuous	Fine adj $\pm 20^\circ$	360° , fine $\pm 20^\circ$
Elevation	: 0° - 90° Continuous		0° - 90° Continuous
Net weight	: 1000 Kgs with Non penetrating mast.		

Environmental

Wind loading	: Operational : 80 Kmph Survival : 200 Kmph
Temperature	: - 40° to 60° C ₂
Solar Radiation	: 360° BTU/h/ft ²
Atmospheric Conditions	: Salt, Pollutants as encountered in Coastal and Industrial Areas
Rain	: 100 mm/hr



COMSAT SYSTEMS PVT LTD

Plot No: 22/A, IDA Mallapur, Hyderabad - 500 076, INDIA.
 Tel: +91-40-27152329, 27177653, 27150484 Fax: +91-40-27155045
 Email: johns@comsat-systems.com Website: www.comsat-systems.com