

## GS4.5M VSAT ANTENNA

### Key Features

- \* Meets or Exceeds CCIR 580 and INTELSAT Requirements
- \* Dual Reflector Modified Gregorian
- \* High G/T, Excellent Pattern Characteristics
- \* Hot-dipped Galvanized Steel Ground Mount Assembly
- \* C-band Antenna Operating in 800MHz Bandwidth Option
- \* 2-port, 3-port or 4-port Linear/Circular Feed
- \* Field Changeable Feed System, Switchable Circular to Linear C-band
- \* Antenna Az 0°~360°(Continuous) Pointing Range

### Antenna Accessories

- \* Motorization Kits
- \* 50 Satellite Positions Preset
- \* Limit Switches
- \* Steptrack
- \* ODU Support Kits
- \* Factory Feed System Testing and Documentation
- \* Ocean Transport Packing
- \* Foundation Kit
- \* Lightening Rod Kit
- \* Grounding Kit
- \* Cable-Mounting Kit
- \* Major Subsystem Spare Part Kits
- \* Deicing or Anti-icing

### ELECTRICAL SPECIFICATION

	C-Band		Ku-Band	
	Receive	Transmit	Receive	Transmit
Operating Frequency, GHz	3.4~4.2	5.85~6.725	10.95~12.75	13.75~14.5
Gain, Mid-band, dBi	44	47.3	53.2	54.3
Polarization	Linear/ Circular		Linear	
XPD (on Axis), dB	35	35	35	35
XPD(across 1dB Beam Width), dB	33	33	33	33
Axial Ratio (Circular-Polarized)				
2-Port Feed	1.30	1.09		
4-Port Feed	1.06	1.06		
VSWR	1.25	1.25	1.25	1.25
Antenna Noise Temperature	2 port feed		2 port feed	
10° Elevation	34°K		52°K	
30° Elevation	24°K		41°K	



50° Elevation	21°K		37°K	
-3dB Beam Width, Mid-band	1.12°	0.72°	0.37°	0.33°
Typical G/T ( EI> 10° )	25.9dB/°K ( 30° LNA )		32.3dB/°K ( 70° LNA )	
Tx. Power Capability, KW		5		2
Feed Interface	CPR-229G	CPR-137G	WR-75	WR-75
Feed Insertion Loss	0.25	0.2	0.25	0.25
Isolation, Tx to Rx, dB	90		85	
First Sidelobe	-14		-14	
90% Peaks under Following Envelop	29-25log $\theta$ (1° $\leq\theta$ <20° )		29-25log $\theta$ (1° $\leq\theta$ <20° )	

### MECHANICAL SPECIFICATION

Antenna Diameter	4.5 m
Antenna Type	Dual Reflector Modified Gregorian
Mount Type	EI. over Az.
Surface Accuracy (RMS)	$\leq 0.5\text{mm}$
Antenna Pointing Range	
Azimuth	$\pm 90^\circ, \pm 60^\circ$ (Continuous)
Elevation	0°~90° (Continuous)
Polarization	180° (Continuous)
Drive Mode	Manual or Motorized
Motor Drive System	
Azimuth Travel Rate	0.11 °/S (0.06 °/S)
Elevation Travel Rate	0.17 °/S (0.08 °/S)
Polarization	1°/S

### ENVIRONMENTAL SPECIFICATION

Operational Wind	72km/h Gusting to 97km/h
Survival Wind	216km/h
Temperature	-40°C ~ + 60°C
Relative Humidity	100%
Solar Radiation	1135Kcal/ h/ m <sup>2</sup>
Seismic (Survival)	0.3g (H), 0.15g (V)
Ice Loading	13mm Operational; 25mm Survival

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