

# Diameter 5 M Dual Reflector Antenna

**Model No.** HGA - 5



**Options**

- Operational Band
  - X-Band Low PIM Antenna System
  - L, S, C, X, Ku, Ka, or DBS Band Antenna System
  - Extended Ku Antenna System
- Multiband Antenna System
- Deicing Systems (Heating), Hub (Heating Cooling)
- LNA , HPA , U/C or D/C System Integration
- Tracking Antenna System
- Step, Monopulse, Memory, or Manual track
- Turnkey Installation and Testing
- Packing for Sea and Air Transport
- Full Motion or Limit Motion
- Extended Azimuth Travel Range

## Electrical Specifications

Model	HG5CC2		HG5CC4		HG5KUC4		HGKUL4		HG5XC4		HG5KAC2	
Electrical	C-Band Circular Pol.		C-Band Circular Pol.		Ku-Band Circular Pol.		Ku-Band Linear Pol.		X-Band Circular Pol.		Ka-Band Circular Pol.	
Item	Rx : 1 Port	Tx : 1 Port	Rx : 2 Ports	Tx : 2 Ports	Rx : 2 Ports	Tx : 2 Ports	Rx : 2 Ports	Tx : 2 Ports	Rx : 2 Ports	Tx : 2 Ports	Rx :1 Port	Tx :1 Port
Frequency(GHz)	3.625 ~ 4.2	5.85 ~ 6.425	3.625 ~ 4.2	5.85 ~ 6.425	11.45 ~ 12.2	13.75 ~ 14.5	10.95 ~ 12.75	13.75 ~ 14.5	7.25 ~ 7.75	7.9 ~ 8.4	20.2 ~ 21.2	30 ~ 31
Gain(Mid:dBi)	43.8	47.44	43.7	47.34	53.3	54.85	53.2	54.85	49.23	49.96	57.57	60.28
Typical G/T (20° EL)	25.0 dB/K (30K LNA)		26.1 dB/K (30K LNA)		32.1 dB/K (70K LNA)		32.1 dB/K (70K LNA)		29.68 dB/K (45K LNA)		33.74 dB/K (20.7 GHz)120K LNA)	
Beam Width (3 dB)	1.07°	0.7°	1.07°	0.7°	0.36°	0.30°	0.36°	0.30°	0.62°	0.57°	0.22°	0.15°
VSWR	1.3		1.3		1.3		1.3		1.3		1.3	
Antenna Noise Temperature												
5°(EL)	59 K	•	51 K	•	80 K	•	81 K	•	60 K	•	200 K	•
10°(EL)	52 K	•	42 K	•	67 K	•	68 K	•	51 K	•	155 K	•
20°(EL)	45 K	•	38 K	•	60 K	•	57 K	•	46 K	•	121 K	•
40°(EL)	41 K	•	34 K	•	53 K	•	52 K	•	43 K	•	94 K	•
Axial Ratio	0.50 dB		0.5 dB		0.5 dB		N/A		1 dB		0.75 dB	
Cross Polarization Isolation	30.8 dB		30.8 dB		30.8 dB		35.0 dB		24.8 dB		27.3 dB	
Port to Port Isolation												
Rx to Rx	•	•	20 dB	•	-35 dB	•	-35 dB	•	-23 dB	•	-20 dB	•
TxtoTx	•	•	•	20 dB	•	-35 dB	•	-35 dB	•	-23 dB	•	-20 dB
Txto Rx	-85 dB	•	-85 dB	•	-85 dB	•	-85 dB	•	*-120dB	•	•	•
Rx toTx	•	-85 dB	•	-85 dB	•	-70 dB	•	-70 dB	•	*-120dB	•	•
Side lobe Performance	ITU-R S.580		ITU-R S.580		ITU-R S.580		ITU-R S.580		ITU-R S.580		ITU-R S.580	
Max Power	10KW CW		10KW CW		2KW CW		2KW CW		2KW CW		0.4KW CW	
RF Specification	H106824/025		H110025-03/04		H111360/03		H104817/025		H110167/045		H112900-1/025	

※ All feed flange values G/T 20° elevation dry clear weather 18° C temperature no RF interference structure building wood land mountain front area

※ \*: X-Band Low PIM Option

# Diameter 5 M Dual Reflector Antenna

## Mechanical Specifications

Antenna Diameter	5 M Dual Shaped Surface Reflector Type
Antenna Type	Kingpost Pedestal (Option Other Yoke & Tower)
Reflector	Shaping formed aluminum panels, galvanized steel back-up structure
Pedestal Configuration	Elevation over azimuth pedestal, constructed of galvanized steel
Azimuth Travel	±60° or 180°(3 segments @ 60°) Option Full Motion±270°(Yoke & Tower Type)
Elevation Travel	5 to 90° continuous
Azimuth Travel Rate	0.06°/sec (C-Band), 0.02°/sec (Ku-Band)Jack Screw
Elevation Travel Rate	0.06°/sec (C-Band), 0.02°/sec (Ku-Band)Jack Screw
Foundation (L x W x D)	3.8 x 3.8 x 0.4 m
Shipping Containers	one 40 ft standard
Soil Bearing Pressure	10,000 kg/m <sup>2</sup>

## Environmental Specifications

Survival Wind Loading	200 km/h
Operational Wind Loading	72 km/h, gusting to 97 km/h
Operational Temperature	-20° to + 50°C
Survival Temperature	-30° to + 60°C
Rain	up to 100 mm/h
Relative Humidity	0 ~ 100 %
Solar Radiation	1000 kcal/h/m <sup>2</sup>
Ice (Survival)	2.5 cm on all surfaces or 1.3 cm on all surfaces with 130 km/h wind gusts
Shock and Vibration	As encountered during shipment by airplane, ship or truck
Atmospheric Conditions	As encountered in coastal regions and/or heavily industrialized areas

※ Without active elements and components.

## Antenna Drawing (unit : mm)

