

Diameter 21 M Dual Reflector Antenna

Model No. HGA - 21



Options

- Operational Band
 - L-Band, C-Band, ECXT C-Band, or X-Band
- Polarization:
 - Circular, Linear, Pol. (only, both),
 - Circular/Linear Manual or Remote Switchable Feeds
- Full Motion Wheel Rail Track, Yoke Tower Limit Motion
- Deicing Reflector
- Hub (Heating Cooling)

Electrical Specifications

Model	HG21CL4		HG21CC4		HG21CC(L)4		HG21ECL4		HG21XC4	
Electrical	C-Band 4Ports Linear Pol.		C-Band 4Ports Circular Pol.		C-Band 4Ports CP (LP) Switchable		Ext C-Band 4Ports Linear Pol.		X-Band Circular Pol.	
Item	Receive	Transmit	Receive	Transmit	Receive	Transmit	Receive	Transmit	Receive	Transmit
Frequency(GHz)	3.625 ~ 4.200	5.850 ~ 6.425	3.625 ~ 4.200	5.850 ~ 6.425	3.625 ~ 4.200	5.850 ~ 6.425	3.400 ~ 4.200	5.850 ~ 6.725	7.250 ~ 7.750	7.900 ~ 8.400
Gain(Mid:dBi)	57.6	61.1	57.6	61.1	57.6	61.1	57.5	61.1	62.6	63.4
Typical G/T(20°EL)	38.8 dB/K		38.8 dB/K		38.6 dB/K		38.36 dB/K		42.26 dB/K (45 K LNA)	
Beam Width(3dB)	0.22°	0.15°	0.22°	0.15°	0.22°	0.15°	0.22°	0.15°	0.12°	0.11°
VSWR	1.25		1.3		1.3		1.3		1.3	
Antenna Noise Temperature										
5°(EL)	56 K	•	56 K	•	59 K	•	67 K	•	81 K	•
10°(EL)	46 K	•	46 K	•	49 K	•	57 K	•	71 K	•
20°(EL)	40 K	•	40 K	•	44 K	•	52 K	•	64 K	•
40°(EL)	38 K	•	38 K	•	42 K	•	50 K	•	63 K	•
Axial Ratio	N/A		0.5 dB		0.5 dB (CP)		N/A		0.75 dB	
Cross Polarization Isolation	35.0 dB		30.8 dB		30.8 dB (35)		35.0 dB		27.8 dB	
Within 1dB BW	30.0 dB		30.7 dB		30.7(30) dB		30.0 dB		27.8 dB	
Port to Port Isolation										
Rx to Rx	35 dB	•	20 dB	•	20(35)dB	•	35 dB	•	17 dB	•
TxtoTx	•	35 dB	•	20 dB	•	20(35)dB	•	35 dB	•	17 dB
Txto Rx	-85 dB	•	-85 dB	•	-85 dB	•	-85 dB	•	-120 dB	•
Rx toTx	•	-85 dB	•	-85 dB	•	-85 dB	•	-85 dB	•	*-120 dB
Side lobe Performance	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		10KW CW		10KW CW		2KW CW	
RF Specification	H10472/015		H106824/025		H112823/05		H112810LP/05		H113095/05	

※ 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

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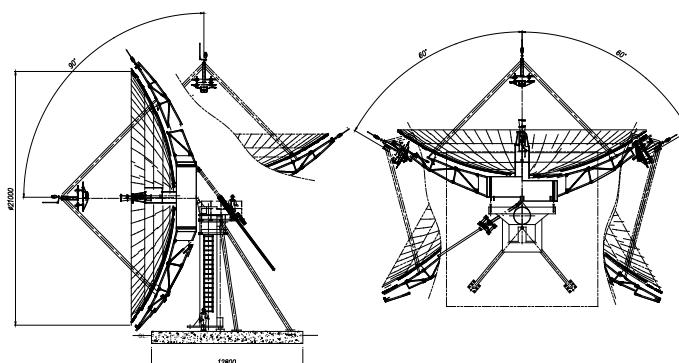
Mechanical Specifications

Antenna Diameter	21 M Dual Shaped Surface Reflector Type
Antenna Type	Kingpost Pedestal (Option Other Yoke&Tower, Rail Track)
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 & TowerRail Track)
Elevation Travel	5 to 90° continuous
Azimuth Travel Rate	0.02°/secJack Screw
Elevation Travel Rate	0.02°/secJack Screw
Foundation (L x W x D)	12.8 x 12.8 x 0.8 m
Shipping Containers	six 40 ft open top, five 40 ft standard, two 40 ft flat rack
Soil Bearing Pressure	10,000 kg/m ²

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 ²
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

Antenna Drawing (unit: mm)



Side View

Front View