

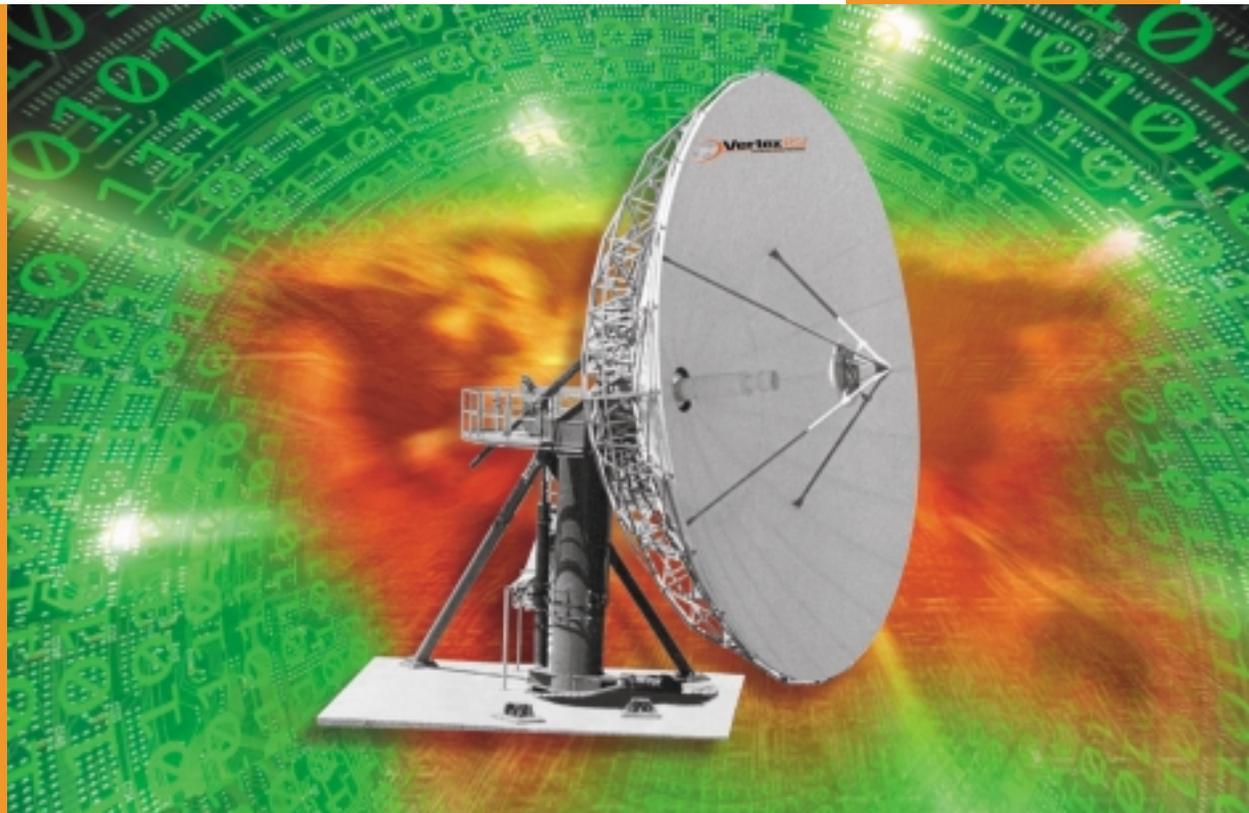
MODEL

13-METER

KPC & KPK

C & KU-BAND

KINGPOST



The VertexRSI 13-Meter C-band and Ku-band antennas offer superior performance for a variety of applications, such as: broadcast uplinks, private networks, domestic satellite telephony/video networks, and international INTELSAT Standard "A" and "B" Earth Stations.

Model 13 KPC (C-band) and model 13 KPK (Ku-band) antennas incorporate multiple tiers of stretch-formed double-contoured panel radials, and hub assemblies for ease of field alignment. The reflectors and elevation/azimuth kingpost pedestals provide the stiffness and pointing accuracy required for C-band and Ku-band operation. These antennas are designed for full orbital arc coverage.

## Key Features

- INTELSAT Compliant
- Manual or Motorized Azimuth, Elevation, and Polarization Drive Systems
- Turnkey installation or Installation Assistance
- Reflector and Feed Deicing Systems Available
- Convenient Access Ladder & Platform
- Azimuth segment change without lifting jack housing

**Mechanical**

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Azimuth Travel	180° (in three 70° overlapping segments)
Azimuth Travel Rate	0.06°/second *
Elevation Travel	0° to 90° continuous
Elevation Travel Rate	0.03°/second *
Polarization Travel	±95° (2-Port), ±50° (4-Port)
Polarization Travel Rate	1.0°/second
Weight - Reflector	17,000 pounds (7,711 kg)
Weight - Pedestal	15,400 pounds (6,985 kg)
Shipping Weight (Typical)	48,507 pounds (22,003 kg)
Shipping Volume	6,664 cubic feet (189 m³)
Reflector Structure	Steel
Pedestal Structure	Steel
Finishes	
Reflectors Surface	Aluminum panels with heat-diffusing white paint
Pedestal	Hot-dip galvanized
Surface Accuracy	0.018 inch (static) Ku-Band 0.025 inch (static) C-Band
Foundation Size	30 ft x 30 ft x 2 ft (9.1 m x 9.1 m x 0.6 m)
Concrete Volume	67 cubic yards (51.26 m³)
Reinforcing Steel	7,500 pounds (3,402 kg)
Soil Bearing Pressure	3,000 PSF (15,000 kg/m²)
<b>Environmental</b>	
Operational Winds	45 mph (72 km/h); gusts to 60 mph (97 km/h)
Survival Winds (Any Position)	125 mph (200mp/h) @ 58° F (15° C)
Ambient Temperature	Operational: +5° to +122° F (-15° to +50° C) Survival: -22° to +140° F (-30° to +60° C) Low temperature kits available
Rain (Operational and Survival)	Up to 4 in/h (10 cm/h)
Relative Humidity (Operational and Survival)	0% to 100% with condensation
Solar Radiation	360 BTU/h/ft² (1000 Kcal/h/m²)
Radial Ice (Survival)	1 inch (2.5 cm) on all surfaces or 0.5 inch (1.3 cm) on all surfaces with 80 mph (130 km/h) wind gusts
Shock and Vibration	As encountered during shipment by commercial air, sea, or land
Corrosive Atmosphere	As encountered in coastal regions and/or heavily industrialized areas
Seismic (survival)	0.3 G's horizontal 0.1 G's vertical

\*Optional Rates Available

# Antenna Products

Electrical	C-Band 4-Port Circular Polarized		C-Band 4-Port Linear Polarized		Ku-Band 4-Port Linear Polarized	
	Receive	Transmit	Receive	Transmit	Receive	Transmit
Frequency (GHz)	3.625- 4.200	5.850- 6.425	3.625- 4.200	5.850- 6.425	10.95- 12.75	14.00- 14.50
Antenna Gain at midband, dBi	53.4	57.2	53.4	57.2	62.2	63.7
Antenna Noise Temperature						
5° Elevation	52° K		50°K		85° K	
10° Elevation	43° K		40° K		71° K	
20° Elevation	37° K		35° K		62° K	
40° Elevation	35° K		32°K		58° K	
Typical G/T at 4.0 or 11.850 GHz 20° Elevation, Clear Horizon						
C-band 30 K LNA	35.0 dB/k		35.1 dB/k			
Ku-band 70°K LNA					41.0 dB/K	
Pattern Beamwidth at midband						
-3 dB	0.37	0.25	0.37	0.25	0.12	0.10
-15 dB	0.78	0.53	0.78	0.51	0.25	0.21
Sidelobe Performance						
First Sidelobe Level Across the Band	-15 + 2 dB		-15 + 2 dB		-15 + 2 dB	
Meets FCC 25.209, Eutelsat, or ITU-RS Recommendation 580 Sidelobe Specification						
Cross Pol Isolation						
On Axis	30.7 dB	30.7 db	35.0 dB	35.0 dB	35.0 dB	35.0 dB
within 1 dB Beamwidth	30.7 dB	30.7 dB	30.0 dB	30.0 dB	35.0 dB	35.0 dB
VSWR Performance	1.25:1	1.25:1	1.25:1	1.25:1	1.30:1	1.30:1
Feed Insertion Loss	0.25 dB	0.20 dB	0.25 dB	0.20 dB	0.65 dB	0.50 dB
Port to Port Isolation						
Rx/Tx (Rx Freq)	0 dB	-30dB	0 dB	-30 dB	0 dB	-50 dB
Tx/Rx (Tx Freq)	-30dB	0 dB	-30.0 dB	0 dB	-85 dB	0 dB
Rx/Rx, Tx/Tx (Same Band)	21 dB	23 dB	30 dB	30 dB	30 dB	30.0 dB
Axial Ratio	0.50 dB	0.50 dB				
Waveguide Interface Flange	CPR-229 G	CPR-159 G	CPR-229 G	CPR-159 G	WR-75 Flat	WR-75 Flat
Total Power Handling Capability		10 kW CW		10 kW CW		2 kW CW
RF Specification	975-1065		975-1271		975-1169	

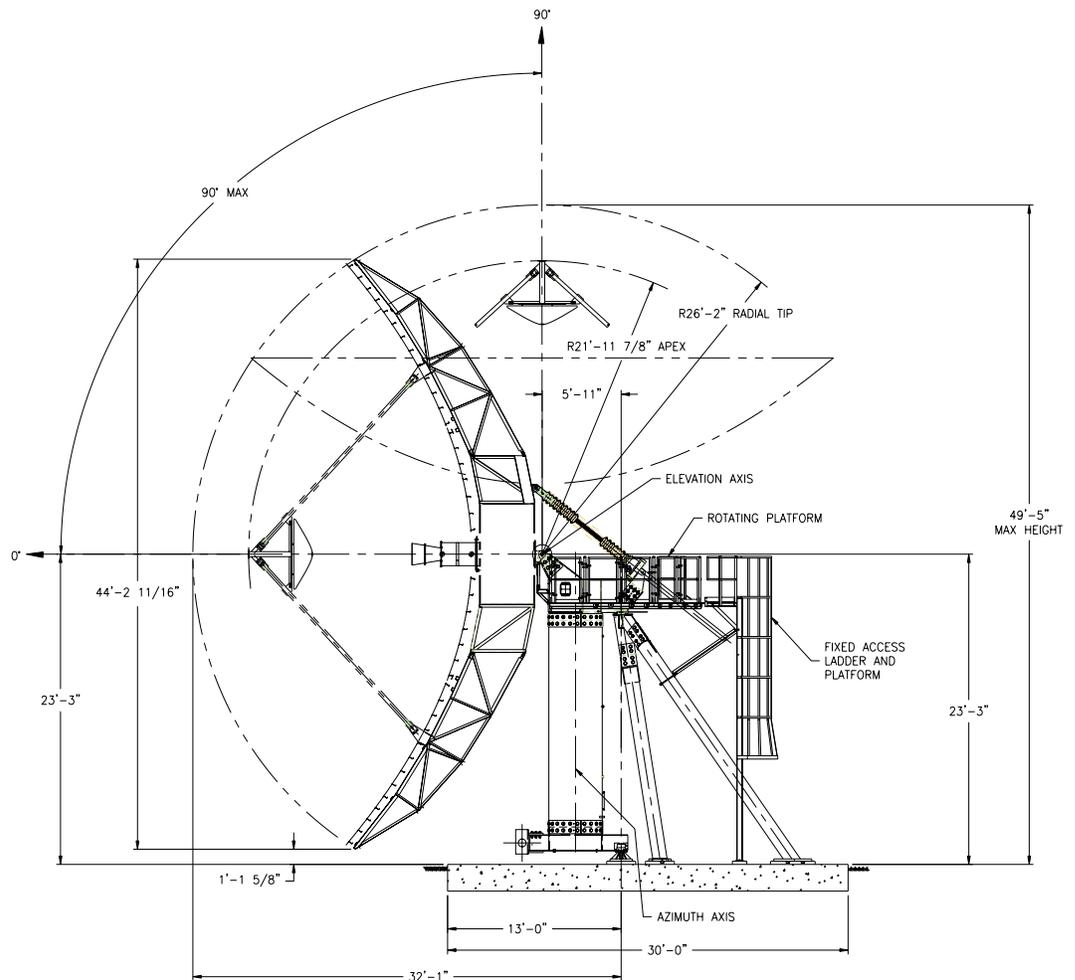
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SIDE ELEVATION



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