

Model 1189 1.8m QD Quick Deploy Antenna

Quick Deploy



The Strength to Perform

Description

The VertexRSI lightweight 1.8-meter Quick Deploy antennas are designed for worldwide transmit and receive operation in C, X, Ku and Ka-band. These portable antennas consist of Precision Compression Molded reflectors and a compact aluminum pedestal. This results in a durable antenna with superior stiffness and high performance under wind loading conditions.

The unique shape and the accurate reflector surface provide good sidelobe and cross-polarization performance. The antenna system is a Series 1189 and the reflector consists of a two-segment SMC compression molded assembly. Repeatability is maintained with precision registration of the reflector segments and the feed support structure.

The 1.8-meter antenna, including the feed, is packaged in three portable cases.

Features

- Precision compression molded offset reflector
- Compact aluminum pedestal
- Transport cases included
- Two-person assembly in less than 15 minutes
- Captive hardware/fasteners
- No tools required
- Quick adjust positioner
- Intelsat approval (C and Ku-band)

Options

- Paint/finishes
- Case upgrades
- Multiple feeds -- C, X, Ku and Ka-band

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Technical Specifications

Electrical*	C-Band 2-Port Circular Polarized		C-Band 2-Port Linear Polarized		Ku-Band 2-Port Linear Polarized		X-Band 2-Port Circular Polarized	
	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	10.950 - 12.750	13.750 - 14.500	7.250 - 7.750	7.900 - 8.400
Antenna Gain at Midband, dBi	35.7	39.0	35.7	38.5	44.0	45.3	41.3	42.0
Sidelobe Compliant with	IESS 207 STD H		IESS 207 STD H		IESS 208 STD H		DSCS Requirements	
Axial Ratio	2.99 dB	2.31 dB					1.5 dB	1.5 dB
VSWR	1.30:1 Max		1.30:1 Max		1.30:1 Max		1.30:1 Max	
Antenna Noise Temperature								
5° Elevation	65 K		56 K		71 K		70 K	
10° Elevation	51 K		42 K		58 K		59 K	
20° Elevation	46 K		37 K		51 K		54 K	
40° Elevation	47 K		38 K		49 K		55 K	
Cross Polarization Isolation								
On Axis	15.3 dB	17.5 dB	30.0 dB	30.0 dB	30.0 dB	30.0 dB	21.3 dB	21.3 dB
Within 1.0 dB Beamwidth	15.3 dB	17.5 dB	23.0 dB	23.0 dB	23.0 dB	23.0 dB	21.3 dB	21.3 dB
Pattern Beamwidth (in degrees at 4.000/6.138 GHz)								
-3 dB Beamwidth	2.78	2.02	2.78	2.02	0.96	0.84	1.42	1.31
-15 dB Beamwidth	5.84	4.24	5.84	4.24	2.02	1.76	2.98	2.75
Power Handling		2.00 kW CW		2.00 kW CW		2.00 kW CW		1.00 kW CW
Output Waveguide	CPR-229G	CPR-137G	CPR-229G	CPR-137G	WR-75 Flat	WR-75 Flat	WR-112	WR-112
Flange Interface								
RF Specification	975-1003		975-3075		975-3079		975-3333	

Mechanical

Reflector Material	Two or four piece composite reinforced materials (SMC)		
Antenna Optics	Prime focus, offset feed, 0.6 F/D ratio		
Elevation Adjustment Range	5° to 90°		
Azimuth Adjustment Range	±34° continuous, fine adjustment		
Shipping Specifications	Case quantity and size	Component weight	Total weight (component and case)
Reflector Petals Case	1 @ 80" x 18" x 44"H	84 lbs. (31.5 kg)	212 lbs. (79 kg)
Reflector Petals (4-piece, optional)	2 @ 41" x 14" x 39"H	44 lbs. (16 kg) each	93 lbs. (34.5 kg)
Pedestal Case	1 @ 54" x 14" x 11"H	46 lbs. (17 kg)	77 lbs. (29 kg)
Legs and Struts Case	1 @ 49" x 18" x 10"H	39 lbs. (14.5 kg)	72 lbs. (27 kg)
Totals (2-piece configuration)	1 @ 56" x 80" x 50"H (on skid)	169 lbs. (63 kg)	404 lbs. (151 kg) includes skid and feed
Net Weight of Antenna	169 lbs. (63 kg), feed packed separately, consult factory for details		

Environmental

Wind Loading	
Operational	20 mph (32 km/h), gusting to 34 mph (55 km/h), with ballast or anchors
Survival	60 mph (97 km/h), with ballast or anchors
Temperature Range (operational)	-40° to +140° F (-40° to +60° C)
Rain (operational)	1/2 in/h (12 mm/h)
Ice (operational)	1/2 in (12 mm)
Atmospheric Conditions	Salt, pollutants and contaminants as encountered in coastal and industrial areas
Relative Humidity	0% to 100%
Solar Radiation	360 BTU/h/ft ² (1000 Kcal/h/m ²)

* Consult factory for Ka-band option.

GENERAL DYNAMICS
SATCOM Technologies

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