1.8 Meter RD Rugged Deploy Antenna Model 1188

Satcom & Antenna Technologies Division

Overview

The CPI Satcom & Antenna Technologies Inc. (CPI SAT) lightweight 1.8-meter (71-inch) Rugged 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 galvanized steel tripod base mounts. This results in a durable, corrosion resistant 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 includes options consisting of a two-segment or four-segment SMC compression molded reflector assembly. Repeatability is maintained with precision registration of the reflector segment(s) and the feed support structure.

The complete 1.8-meter antenna system, including a single feed, is packaged in a reusable wooden crate.

FEATURES

- Precision compression molded offset reflector
- Compact galvanized steel tripod
- Transport cases available
- Two-person assembly in less than 15 minutes
- Captive hardware/fasteners
- No tools required
- Quick adjust positioner

OPTIONS

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

BENEFITS

- Superior stiffness
- High performance under wind loading conditions

APPLICATIONS

- Designed for worldwide transmit and receive operation in C, X, Ku and Ka-band

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Technical Specifications

	C-Band 2-Port Linear Polarized		C-Band 2-Port Circular Polarized		X-Band 2-Port Circular Polarized		Ku-Band 2-Port Linear Polarized	
Electrical*	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	7.250 - 7.750	7.900 - 8.400	10.950-12.750	13.750 - 14.500
Antenna Gain at Midband, dBi	35.7	38.5	35.6	38.5	41.3	42.0	44.2	45.3
Sidelobe Compliant with	IESS 207 STD H		IESS 207 STD H		IESS 207 STD H		IESS 208 STD K	
Axial Ratio			2.30 dB	1.93 dB	1.50 dB	1.50 dB		
VSWR	1.30:1 Max		1.30:1 Max		1.30:1 Max		1.30:1 Max	
Antenna Noise Temperature								
5° Elevation	56 K		68 K		70 K		71 K	
10° Elevation	42 K		55 K		59 K		58 K	
20° Elevation	37 K		50 K		54 K		51 K	
40° Elevation	38 K		50 K		55 K		49 K	
Cross Polarization Isolation								
On Axis	30.0 dB	30.0 dB	17.6 dB	19.1 dB	21.3 dB	21.3 dB	30.0 dB	30.0 dB
Within 1.0 dB Beamwidth	23.0 dB	23.0 dB	17.6 dB	19.1 dB	21.3 dB	21.3 dB	23.0 dB	23.0 dB
Pattern Beamwidth (in degrees at midband)								
-3 dB Beamwidth	2.78	2.02	2.78	2.02	1.42	1.31	0.92	0.82
-15 dB Beamwidth	5.84	4.24	5.84	4.24	2.98	2.75	1.93	1.72
Power Handling	2.00 kW CW		1.00 kW CW		1.00 kW CW		2.00 kW CW	
Output Waveguide Flange Interface	CPR-229G	CPR-137G	CPR-229G	CPR-137G	WR-112	WR-112	WR-75 Flat	WR-75 Flat
RF Specification	975-3083		975-1823		975-2196		975-3080	

Mechanical		
Reflector Material	Composite reinforced materials (SMC)	
Antenna Optics	Prime focus, offset feed, 0.6 F/D	
Mount Type	Quick erect tripod with El/Az canister	
Tripod Pipe Size	3.0 in Schedule 40 pipe (3.5 in OD (8.89 cm))	
Elevation Adjustment Range	5° - 90° continuous, fine adjustment	
Azimuth Adjustment Range	360° continuous, ±20° fine	
Shipping Specifications	Case quantity and size	Component Weight
Option 1 (reflector soft cases and reusable wooden crate)	Consult factory	Consult factory
Option 2 (antenna hard cases)		
Two-piece Reflector Case	1 @ 80" x 19" x 45"H	330 lbs. (150 kg)
Four-piece Reflector Case	2 @ 42" x 15" x 39"H	275 lbs. (125 kg)
Pedestal/Feedboom/X-Arms Case	1 @ 75" x 21" x 37"H	360 lbs. (163 kg)
Optional C-band Feed with Case	1 @ 33" x 20" x 11"H	45 lbs. (20 kg)
Net Weight of Antenna		354 lbs. (161 kg)

Environmental	
Operational Wind Loading	20 mph (32 km/h), no ballast or anchors
	45 mph (72 km/h), with ballast or anchors
Survival Wind Loading	Gusting to 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.

Contact us at CustomerCareSAT@cpii.com or call us at +1 770-689-2040.
The data should be used for basic information only.
Formal, controlled specifications may be obtained from CPI for use in equipment design.

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For more detailed information, please refer to the corresponding CPI technical description if one has been published, or contact CPI. Specifications may change without notice as a result of additional data or product refinement. Please contact CPI before using this information for system design.

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