

Satcom & Antenna Technologies Division



Overview

The CPI Satcom & Antenna Technologies Inc. (CPI SAT) lightweight 2.4-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 1259 and the reflector consists of a four-segment SMC compression molded assembly. Repeatability is maintained with precision registration of the reflector segments and the feed support structure.

The 2.4-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 5 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

CPI 2.4 Meter Quick Deploy Antenna

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	38.2	42.2	38.2	42.0	47.6	49.2	43.7	44.3
Sidelobe Compliant with	IESS 207 STD H		IESS 207 STD H		IESS 208 STD E1		DSCS Requirements	
Axial Ratio	2.5 dB	2.0 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		54 K		72 K		55 K	
10° Elevation	56 K		43 K		61 K		45 K	
20° Elevation	52 K		39 K		55 K		41 K	
40° Elevation	53 K		41 K		53 K		41 K	
Cross Polarization Isolation								
On Axis	17.0 dB	19.0 dB	30.0 dB	30.0 dB	30.0 dB	30.0 dB	21.3 dB	21.3 dB
Within 1.0 dB Beamwidth	17.0 dB	19.0 dB	26.0 dB	26.0 dB	27.0 dB	27.0 dB	21.3 dB	21.3 dB
Pattern Beamwidth (in degrees at 4.000/6.138 GHz)								
-3 dB Beamwidth	2.09	1.33	2.09	1.35	0.67	0.57	1.12	1.04
-15 dB Beamwidth	4.39	2.84	4.39	2.84	1.41	1.20	2.35	2.18
Power Handling		1.00 kW CW		2.00 kW CW		1.00 kW CW		2.00 kW CW
Output W/G Flange Interface	CPR-229G	CPR-137G	CPR-229G	CPR-137G	WR-75 Flat	WR-75 Flat	WR-112	WR-112
RF Specification	975-1010		975-3074		975-3077		975-1406	

Mechanical

Reflector Material	Four-piece composite reinforced materials (SMC)
Antenna Optics	Prime focus, offset feed, 0.8 F/D
Elevation Adjustment Range	0° to 40° (inverted), 30° to 90° (upright position)
Azimuth Adjustment Range	±25° continuous
Tracking Range (dual axis motorized)	±15° within adjustment range
Shipping Specifications	Case quantity and size
Reflector Petals (hard cases)	2 @ 55" x 55" x 14"H
Also available in 2 soft cases	
Reflector Support	1 @ 44" x 13" x 26"H
Tripod and Feed Support	1 @ 62" x 10" x 23"H
Actuators (manual and optional motorized)	1 @ 42" x 12" x 21"H
Reflector Templates	1 @ 97" x 10" x 13"H
Positioner and Kingpost	1 @ 27" x 45" x 19"H
Total Weight (on skid)	1 @ 103" x 90" x 65"H
Net Weight of Antenna	528 lbs. (239.5 kg), feed packed separately, consult factory for details
Component weight	145 lbs. (65.7 kg) each
	100 lbs. (45.3 kg)
	130 lbs. (59.0 kg)
	117 lbs. (53.0 kg)
	88 lbs. (39.9 kg)
	130 lbs. (59.0 kg)
	1,142 lbs. (518 kg)

Environmental

Operational Wind Loading	25 mph (40 km/h), no ballast or anchors
	45 mph (72 km/h), with ballast or anchors
Survival Wind Loading	80 mph (130 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.



**Satcom & Antenna
Technologies Division**
1700 NE Cable Drive
Conover, NC
USA 28613

tel +1 770-689-2040
+1 888-874-7646 (In North America)
+1 619-240-8480 (Outside North America)
email CustomerCareSAT@cpii.com
web www.cpii.com

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.

©2020 Communications & Power Industries LLC. Company proprietary; use and reproduction is strictly prohibited without written authorization from CPI.