

# 4.6 Meter Prime Focus Antenna

## Antenna Technologies



### Overview

The CPI Antenna Technologies' 4.6 meter antenna delivers exceptional performance for receive-only applications for C through Ku-band frequencies.

The antenna offers a prime focus reflector that incorporates precision-formed panels, contoured radials and hub assembly. The reflector is supported by a galvanized pedestal that provides the required stiffness for pointing and tracking accuracy. The pedestal is designed for full orbital arc coverage and can be readily adaptable to ground or rooftop installations. A low cost motorization and control system features is also available.

#### FEATURES:

- Bolt-together system
- 3.4 to 12.75 GHz operation
- Durable FRP reflector
- 125 mph (200km/h) wind survival
- Fully motorized

#### OPTIONS:

- C, X, Ku, and C/Ku-band feed configurations
- C/Ku receive-only feed system
- Specialized feed systems  
(e.g., extended, multi-band)
- Improved feed cross-pol performance
- Fixed or motorizable pedestal
- Antenna control system with tracking
- Integrated LNA or LNB systems
- Load frame or non-penetrating mounts
- Packing for sea and air transport
- Turnkey installation and testing

#### UPGRADES:

- Extended azimuth travel
- Low operating temperatures

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## Specification: C/Ku-Band Combined Feeds

ELECTRICAL <sup>(1)</sup>		C-Band Linear Polarized Receive Only	C-Band Circular Polarized Receive Only	Ku-Band Linear Polarized Receive Only
Antenna Size	4.6M (15.2ft)			
Operating Frequency (GHz)	3.625 - 4.2 GHz	3.625 - 4.2 GHz	10.95 - 12.75 GHz	
Midband Gain(+/- .5dB)i	39.4 dB	39.4 dB	48.3 dBi	
Beamwidth 3dB	1.2"	1.2"	0.41"	
Feed Interface	CPR 229	CPR 229	WR 75	
Cross-Pol Isolation	>25 dB Min. (on axis)	> 17 dB Min. (on axis)	>25 dB Min. (on axis)	
First Sidelobe (Typical)	-20 dB	-20 dB	-20 dB	
VSWR	1.3:1 Max.	1.5:1 Max	1.3:1 Max.	
MECHANICAL/ENVIRONMENTAL				
Reflector Material	Glass Fiber Reinforced Polyester SMC			
Antenna Optics	8 Piece Axisymmetric, Prime Focus			
Mount Configuration	EL over AZ pedestal			
Elevation Adjustment Range	0° to 90° Continuous Motorized			
Azimuth Adjustment Ran	120° Continuous Motorized			
Shipping Containers	One 20 ft standard (2 units in One 40 ft.)			
ENVIRONMENTAL PERFORMANCE				
Wind Loading Operational Survival (any Position)	45 mph gusting to 60mph (72 km/h gusting to 97 km/h) 125 mph (201 km/h)			
Operational Temperature	-5° to 122° F (-20° C to +50° C)			
Relative Humidity	0 to 100% (Condensing)			
Operational Rain	1/2' / Hr.			
Atmospheric Conditions	Salt, Pollutants and Contaminants as Encountered in Coastal and Industrial Areas			
Solar Radiation	360 BTU/h/ft²			

<sup>(1)</sup> Typical G/T at 20° elevation with clear horizon using single bolt-on LNA feed.

