Antenna Technologies



Overview

The CPI Antenna Technologies' 1.8 meter antenna delivers exceptional performance for receive only applications for C and Ku-Band frequencies. specializes in providing a wide range of high quality, cost-effective Very Small Aperture Terminal (VSAT) products including fixed terminals, transportable and commercial grade antennas, and customizable specialty products.

Available in axisymmetric designs, VSAT antennas come in two different feeds and sizes to fit your application. The axisymmetric design is commercial quality RxO antenna available in C and Ku-Bands.

The electrical performance is compliant with FCC and ITU-RS-580 sidelobe specifications and Intelsat (A, B, C) and Eutelsat requirements.

FEATURES:

- Available in offset axisymmetric designs
- Designed for 3.6 to 12.75 GHz operation, meeting FCC and ITU-RS-580 requirements
- Galvanized steel elevation-over-azimuth pedestal with jackscrews
- Survives 125 mph winds in any position
- Quickly re-establish communications in the wake of a disaster

OPTIONS:

- C and Ku-Band feeds
- C and Ku receive only feed systems
- CPR manual or remote switchable feeds
- Antenna control system with tracking
- Reflector and feed deicing systems
- Environmental hub configurations
- Integrated transmit cross axis kits
- Integrated LNA or LNB systems
- HPAs, converters and M&C systems
- Packing for sea and air transport
- Turnkey installation and testing

UPGRADES:

- X-Band low PIM reflector/feed
- Continuous bullgear azimuth travel
- High wind configuration
- Low operating temperatures
- High power configurations

BENEFITS:

- High antenna efficiency
- Excellent rejection of noise and microwave interference

APPLICATIONS:

• Communications, Data Transfer, Broadcast



Specifications

Antenna Size 1.8M (71 in.) Operating Frequency (GHz) 3.625-4.200 10.70 - 12.75 Midband Gain (±.5dB) 35.5 dBi 44.5 dBi 3 dB Beamwidth 2.9° 0.9° Antenna Noise Temperature 20° Elevation 30° Elevation 30° Elevation 30° Elevation 30° Elevation 47 K 38 K Polarization 1.30 dB (200 maxis) 38 K Polarization Isolation (Linear) > 20 dB - 20 dB Cross Polarization Isolation (Linear) > 30 dB (on axis) > 30 dB (on axis) SWUR 1.3:1 Max 1.3:1 Max Feed Interface CPR 229 F Rectangular WR 75 or WC 75 MECHANICAL (1) Reflector Material Glass fiber reinforced polyester SMC Antenna Optics Prime focus, one-piece, offset feed Mast Pipe Size 3.5' SCH 40 Pipe (4.0" OD) 10.16 cm Elvation Adjustment Range 5' to 90°, continuous fine adjustment Shipping Specifications 160 lbs. (72 km) Shipping Specifications Temperature Operational Survival Survival Survival 40° to 140° f (40° to 60° C) - 50	ELECTRICAL (1)	C-Band Receive Only	Ku-Band Receive Only
Midband Gain (± .5dB) 3.5dBi 3.5dBi 4.4.5dBi 3.5dBeanwidth 2.9° 0.9° Antenna Noise Temperature 20° Elevation 30° Elevation 30° Elevation 47 K 35 K Polarization Linear or Circular First Sidelobe (typical) -20 dB -20 dB -20 dB -20 dB Cross Polarization Isolation (Linear) >30 Beanwidth -20 dB -2	Antenna Size	1.8M (71 in.)	
Antenna Noise Temperature 20° Elevation 30° Elevation 47 K 35 K 35 K Polarization	Operating Frequency (GHz)	3.625-4.200	10.70 - 12.75
Antenna Noise Temperature 20° Elevation 30° Elevation 30° Elevation 30° Elevation 49 K 47 K 38 K 35 K Polarization Linear or Circular Single or Dual Linear First Sidelobe (typical) -20 dB -20 dB -20 dB Cross Polarization Isolation (Linear) >30 dB (on axis) >30 dB (on axis) VSWR 1.3:1 Max 1.3:1 Max 1.3:1 Max Feed Interface CPR 229 F Rectangular WR 75 or WC 75 MECHANICAL (1) Reflector Material Antenna Optics Prime focus, one-piece, offset feed Mast Pipe Size 3.5° SCH 40 Pipe (4.0° OD) 10.16 cm Elvation Adjustment Range So to 90°, continuous fine adjustment Azimuth Adjustment Range Shipping Specifications ENVIRONMENTAL (1) Wind Loading Operational Survival Temperature Operational Survival Salt, pollutants and contaminants as encountered in coastal and industrial areas	Midband Gain (± .5dB)	35.5 dBi	44.5 dBi
Polarization Linear or Circular Single or Dual Linear First Sidelobe (typical) -20 dB -20 dB Cross Polarization Isolation (Linear) >30 dB (on axis) >30 dB (on axis) VSWR 1.3:1 Max 1.3:1 Max Feed Interface CPR 229 F Rectangular WR 75 or WC 75 MECHANICAL (1) Reflector Material Glass fiber reinforced polyester SMC Antenna Optics Prime focus, one-piece, offset feed Mast Pipe Size 3.5 "SCH 40 Pipe (4.0" 0D) 10.16 cm Elvation Adjustment Range 5° to 90°, continuous Shipping Specifications 160 lbs. (72 kg.) ENVIRONMENTAL (1) Wind Loading Operational Survival -40° to 140° F (-40° to 60° C) -50° to 160° F (-46° to 71° C) Atmospheric Conditions Salt, pollutants and contaminants as encountered in coastal and industrial areas	3 dB Beamwidth	2.9°	0.9°
First Sidelobe (typical) - 20 dB - 20 dB - 20 dB Cross Polarization Isolation (Linear) > 30 dB (on axis) SWR 1.3:1 Max 1.3:1 Max Feed Interface CPR 229 F Rectangular WR 75 or WC 75 MECHANICAL (1) Reflector Material Glass fiber reinforced polyester SMC Antenna Optics Prime focus, one-piece, offset feed Mast Pipe Size Elvation Adjustment Range 3.5" SCH 40 Pipe (4.0" OD) 10.16 cm Elvation Adjustment Range So to 90°, continuous fine adjustment Azimuth Adjustment Range Shipping Specifications 160 lbs. (72 kg.) ENVIRONMENTAL (1) Wind Loading Operational Survival Temperature Operational Survival Atmospheric Conditions Salt, pollutants and contaminants as encountered in coastal and industrial areas	20° Elevation		
Cross Polarization Isolation (Linear) >30 dB (on axis) 1.3:1 Max Feed Interface CPR 229 F Rectangular WR 75 or WC 75 MECHANICAL (1) Reflector Material Antenna Optics Prime focus, one-piece, offset feed Mast Pipe Size Elvation Adjustment Range So to 90°, continuous fine adjustment Azimuth Adjustment Range Shipping Specifications ENVIRONMENTAL (1) Wind Loading Operational Survival Temperature Operational Survival Atmospheric Conditions Salt, pollutants and contaminants as encountered in coastal and industrial areas	Polarization	Linear or Circular	Single or Dual Linear
Temperature Operational Survival 1.3:1 Max	First Sidelobe (typical)	- 20 dB	- 20 dB
Feed Interface CPR 229 F Rectangular WR 75 or WC 75 MECHANICAL (1) Reflector Material Glass fiber reinforced polyester SMC Antenna Optics Prime focus, one-piece, offset feed Mast Pipe Size 3.5" SCH 40 Pipe (4.0" OD) 10.16 cm Elvation Adjustment Range 360° continuous fine adjustment Azimuth Adjustment Range 360° continuous Shipping Specifications ENVIRONMENTAL (1) Wind Loading Operational Survival 45 mi./h (72 km/h) 125 mi./h (201 km/h) Temperature Operational Survival Author of 140° F (-40° to 140° F (-40° to 60° C) -50° to 160° F (-46° to 71° C) Atmospheric Conditions Salt, pollutants and contaminants as encountered in coastal and industrial areas	Cross Polarization Isolation (Linear)	>30 dB (on axis)	>30 dB (on axis)
Reflector Material Reflector Mat	VSWR	1.3:1 Max	1.3:1 Max
Reflector Material Antenna Optics Prime focus, one-piece, offset feed Mast Pipe Size 3.5" SCH 40 Pipe (4.0" OD) 10.16 cm Elvation Adjustment Range 5° to 90°, continuous fine adjustment Azimuth Adjustment Range 360° continuous Shipping Specifications 160 lbs. (72 kg.) ENVIRONMENTAL (1) Wind Loading Operational Survival Temperature Operational Survival Atmospheric Conditions Salt, pollutants and contaminants as encountered in coastal and industrial areas	Feed Interface	CPR 229 F	Rectangular WR 75 or WC 75
Antenna Optics Mast Pipe Size 3.5" SCH 40 Pipe (4.0" OD) 10.16 cm Elvation Adjustment Range 5° to 90°, continuous fine adjustment Azimuth Adjustment Range 360° continuous Shipping Specifications 160 lbs. (72 kg.) ENVIRONMENTAL (1) Wind Loading Operational Survival Temperature Operational Survival Atmospheric Conditions Salt, pollutants and contaminants as encountered in coastal and industrial areas	MECHANICAL (1)		
Mast Pipe Size 3.5" SCH 40 Pipe (4.0" OD) 10.16 cm Elvation Adjustment Range 5° to 90°, continuous fine adjustment Azimuth Adjustment Range 360° continuous Shipping Specifications 160 lbs. (72 kg.) ENVIRONMENTAL (1) Wind Loading Operational Survival Temperature Operational Survival Atmospheric Conditions Salt, pollutants and contaminants as encountered in coastal and industrial areas	Reflector Material	Glass fiber reinforced polyester SMC	
Elvation Adjustment Range 5° to 90°, continuous fine adjustment Azimuth Adjustment Range 360° continuous 5hipping Specifications 160 lbs. (72 kg.) ENVIRONMENTAL (1) Wind Loading Operational Survival Temperature Operational Survival Atmospheric Conditions Salt, pollutants and contaminants as encountered in coastal and industrial areas	·	Prime focus, one-piece, offset feed	
Azimuth Adjustment Range Shipping Specifications 160 lbs. (72 kg.) ENVIRONMENTAL (1) Wind Loading Operational Survival Temperature Operational Survival Atmospheric Conditions Salt, pollutants and contaminants as encountered in coastal and industrial areas	· · · · · · · · · · · · · · · · · · ·		
Shipping Specifications ENVIRONMENTAL (1) Wind Loading Operational Survival Temperature Operational Survival Atmospheric Conditions Salt, pollutants and contaminants as encountered in coastal and industrial areas	Elvation Adjustment Range	5° to 90°, continuous fine adjustment	
ENVIRONMENTAL (1) Wind Loading Operational Survival 125 mi./h (72 km/h) Temperature Operational Survival -40° to 140° F (-40° to 60° C) -50° to 160° F (-46° to 71° C) Atmospheric Conditions Salt, pollutants and contaminants as encountered in coastal and industrial areas	Azimuth Adjustment Range	360° continuous	
Wind Loading Operational Survival Temperature Operational Survival Atmospheric Conditions Operational Survival Salt, pollutants and contaminants as encountered in coastal and industrial areas	Shipping Specifications	160 lbs. (72 kg.)	
Temperature Operational Survival Temperature Operational Survival -40° to 140° F (-40° to 60° C) -50° to 160° F (-46° to 71° C) Atmospheric Conditions Salt, pollutants and contaminants as encountered in coastal and industrial areas	ENVIRONMENTAL (1)		
Survival -50° to 160° F (-46° to 71° C) Atmospheric Conditions Salt, pollutants and contaminants as encountered in coastal and industrial areas	Operational		
Solar Radiation 360 BTU/h/ft ² (1,000 Kcal/h/m ²)	Atmospheric Conditions	•	
	Solar Radiation	360 BTU/h/ft ² (1,000 Kcal/h/m²)

⁽¹⁾ Some specifications may vary based on the combination of equipment, options and/or upgrades ordered.

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.



Antenna Technologies

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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, © 2023 Communications & Power Industries LLC. Company proprietary: use and reproduction is strickly prohibited without written authorization from CPI.

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