

Technical Specifications

Electrical		C-Band Linear	C-Band Circular	Ku-Band Linear	X-Band Circular
Antenna Size		3.8 M	3.8 M	3.8 M	3.8 M
Operating Frequency (GHz)	Receive Transmit	3.625 - 4.20 GHz 5.845 - 6.425 GHz	3.625 - 4.20 GHz 5.845 - 6.425 GHz	10.95 - 12.75 GHz 13.75 - 14.50 GHz	7.25 - 7.75 GHz 7.9 - 8.4 GHz
Antenna Gain at Midband, dBi (± 0.2 dB)	Receive Transmit	42.00 dBi 46.50 dBi	41.80 dBi 46.3 dBi	51.20 dBi 53.00dBi	47.80 dBi 48.40 dBi
Antenna Noise Temperature					
5° Elevation		55 K	62 K	70 K	60 K
10° Elevation		45 K	52 K	60 K	51 K
20° Elevation		38 K	45 K	55 K	47 K
40° Elevation		36 K	43 K	45 K	47 K
Sidelobe Envelope, Co-Pol (dBi)					
100 λ D $\leq \theta \leq 20^\circ$		29 - 25 Logq dBi -3.5 dBi	29 - 25 Logq dBi -3.5 dBi	29 - 25 Logq dBi -3.5 dBi	29 - 25 Logq dBi -3.5 dBi
20° < $\theta \leq 26.3^\circ$		32 - 25 Logq dBi	32 - 25 Logq dBi	32 - 25 Logq dBi	32 - 25 Logq dBi
26.3° < $\theta \leq 48^\circ$		-10 dBi (averaged)	-10 dBi (averaged)	-10 dBi (averaged)	-10 dBi (averaged)
$\theta < 48^\circ$					
Pattern Beamwidth (in degrees at midband)	-3 dB -15 dB	Rx: 1.40° Tx: 0.90° Rx: 3.20° Tx: 2.00°	Rx: 1.40° Tx: 0.90° Rx: 1.40° Tx: 0.90°	Rx: 0.50° Tx: 0.40° Rx: 1.00° Tx: 0.90°	Rx: 0.80° Tx: 0.70° Rx: 1.60° Tx: 1.50°
Power Handling		1 kW	1 kW	100 kW	2 kW
Cross Polarization Isolation					
On Axis		> 30 dB	Rx > 15 dB Tx > 17.7 dB	Rx > 30 dB Tx > 35dB	Rx > 23.2 dB Tx > 18.8 dB
Within 1.0 dB Beamwidth		> 27 dB	Rx > 15 dB Tx > 17.7 dB	Rx > 25 dB Tx > 26dB	Rx > 23.2 dB Tx > 18.8 dB
Note: Standard C-band Circular polarization in Tx-Band provides an axial ratio of 1.3 (XPD equivalence of 17.7 dB). Optional F-1 station feed available with axial ratio of 1.09 (XPD equivalence >27.3 dB) in Tx band. Call factory when specifying this option. X Band filters available upon request.					
Output Waveguide Interface Flange	Receive Transmit	CPR 229 F CPR 137 or Type N	CPR 229 F CPR 137 or Type N	WR 75 WR 75	WR 112 WR 112
VSWR	Receive Transmit	1.3:1 Max.(<-17.70 dB) 1.3:1 Max.(<-17.70 dB)	1.3:1 Max.(<-17.70 dB) 1.3:1 Max.(<-17.70 dB)	1.5:1 Max.(<-14.00 dB) 1.3:1 Max.(<-17.70 dB)	1.3:1 Max.(<-17.70 dB) 1.3:1 Max.(<-17.70 dB)

Mechanical	
Reflector Material	Glass Fiber Reinforced Polyester SMC
Antenna Optics	Easy-to-assemble, 4 Pc., Offset Fed Prime Focus Design with 0.6 F/D optics.
Mast Pipe Size	10" SCH 80 Pipe (10.75" OD) 27.3 cm.
Elevation Adjustment Range	12° to 90° or 0° to 15° for Polar Latitudes
Azimuth Adjustment Range	360° Continuous with +/- 35° Fine Adjustment

Environmental Performance		
Wind Loading	Operational Survival	65 MPH (104 Km/H) with 0.5 dB loss @ 14.25 GHz 75 MPH (120 Km/H) with 0.5 dB loss @ 6.14 GHz 75 MPH (120 Km/H) with 1.0 dB loss @ 14.25 GHz 150 MPH (240 Km/H)
Temperature	Operational	-40° to 140° F (-40° to 60° C)
Rain	Operational	½" (13mm) per hour
Ice	Operational	-----
Relative Humidity		0 to 100% Condensing
Atmospheric Conditions		Salt, Pollutants and Contaminants as Encountered in Coastal and Industrial Areas
Solar Radiation		360 BTU/h/ft²



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@cpil.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.

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