

R.F.Specification for

CPI 11.10 Meter Cassegrain Antenna

With Four Ports Frequency Reuse Circularly Polarized Feed Preliminary Spec, Low IMP Receive Transmit.

Frequency in GHz	7.250-7.750	7.900-8.400
Port Type	Rx1/Rx2	Tx1/Tx2
Polarization	Circular	Circular
Feed Port Polarizations	RHCP/LHCP	LHCP/RHCP
Antenna Gain (+/- 0.2 dB) 7.250 / 7.900 GHz 7.500 / 8.150 GHz 7.750 / 8.400 GHz	56.70 dBi 57.00 dBi 57.20 dBi	57.50 dBi 57.80 dBi 58.00 dBi
Antenna Noise Temperature 5 degree Elevation 10 degree Elevation 20 degree Elevation 30 degree Elevation	88 K 77 K 72 K 70K	
Typical G/T at 10 deg Elevation 7.250 GHz , clear horizon 60 degree K LNA 80 degree K LNA	35.3 dB/K 34.7 dB/K	
Typical Beamwidth in degrees at 7.500 / 8.150 GHz -3 dB Beamwidth -15 dB Beamwidth	0.22 0.46	0.21 0.44
Sidelobes For Angle A from 1 to 48 Degrees For Angles from 48 to 180 Degrees	Meets ITU-RS-580 Meets ITU-RS-580	
Cross Polarization Isolation On Axis Within 1.0 dB Beamwidth	30.8 dB 30.8 dB	30.8 dB 30.8 dB
VSWR (Return Loss)	1.30:1(17.7dB)	1.30:1(17.7dB)
Axial Ratio	0.50 dB	0.50 dB
Feed Insertion or Ohmic Loss	0.75 dB	0.70 dB
Port to Port Isolation (Rx to Rx, Tx to Tx, Same Band)	17.0 dB	17.0 dB
Port to Port Isolation	0.0 dB (Input)	-110.0 dB
Port to Port Isolation	-110.0 dB	0.0 dB (Input)
Output Waveguide Flange Interface	CPR-112G	CPR-112G
Total Power Handling Capability		2.00 kW CW
Passive IMP Level with two 200 W CW carriers in Tx Band	-135 dBm	

Notes

- ✓ Other operational frequencies available
- ✓ 10% of sidelobes may exceed the sidelobe specifications where applicable.
- ✓ Power handling capability is based on and limited by the physical characteristics in the feed components. Microwave power at these levels may contribute to the radiation hazard or exceed certain offaxis EIRP specifications.
- ✓ G/T is calculated by bolting single LNA directly to the feed. It does not allow for any post LNA effects
- ✓ All values are at the rear feed output flange.

CPI Vertex Antennentechnik GmbH

Baumstr. 46-50
47198 Duisburg
Germany

Tel.: +49 2066 2096 0
Mail: info@vertexant.de
Site: www.vertexant.com

