

Dual Linear Polarized Lens Horn Antenna

8.2 - 12.4 GHz, WR90, 30 dBi Directivity

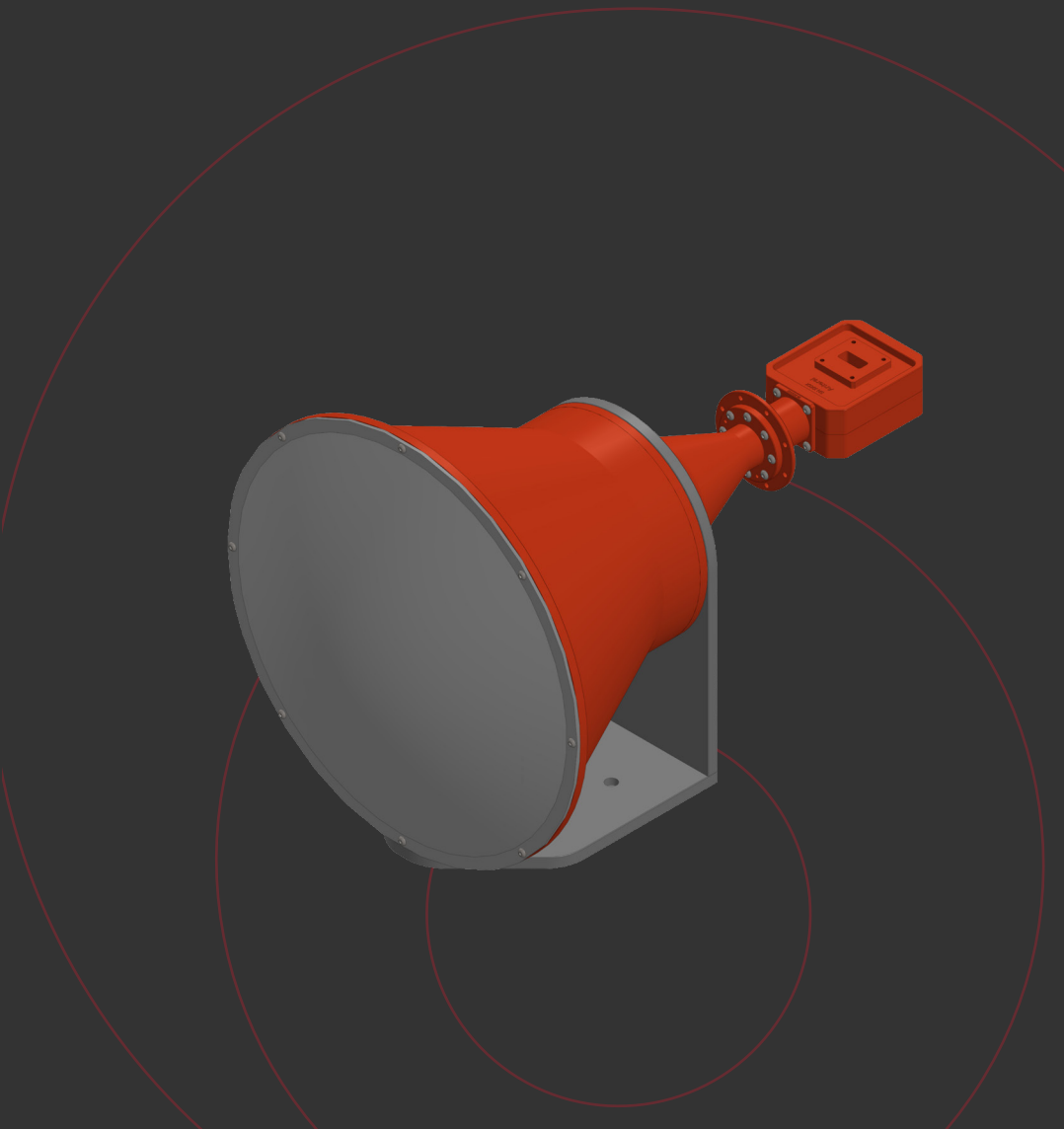
DESCRIPTION

Anteral's Dual Linear Polarized Lens Horn Antennas (DLPLHA) integrate an orthomode transducer (OMT) providing high isolation and cross-polarization cancellation with a conical horn antenna featuring a plano-convex High-Density Polyethylene (HDPE) lens at the aperture. This configuration enables phase correction to achieve high gain, low VSWR, and low side-lobes in a compact form factor.

The antennas operate from 8 to 110 GHz across 12 bands, delivering 30 dBi nominal mid-band directivity and a typical VSWR of 1.25. The OMT supports either horizontal or vertical polarization with more than 35 dB cross-polarization rejection and 40 dB isolation, and is configured with two waveguide ports for horizontal and vertical signals. Custom frequency bands and gain values are available, and Anteral also offers LHAs with linear or circular polarization.

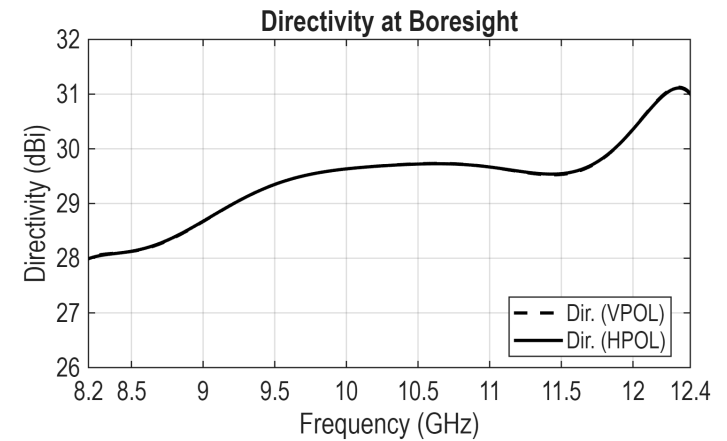
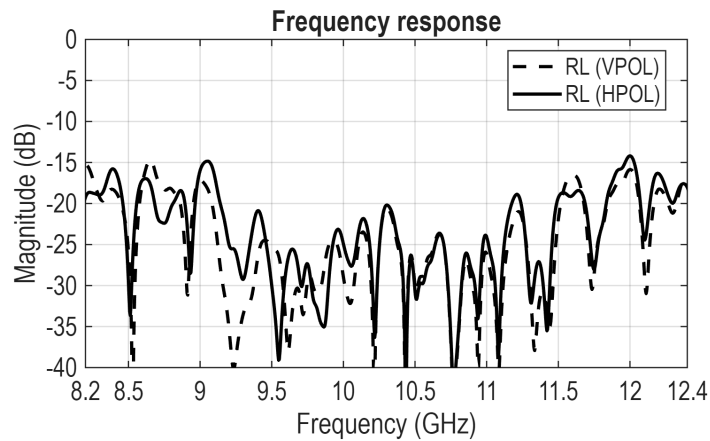
APPLICATIONS

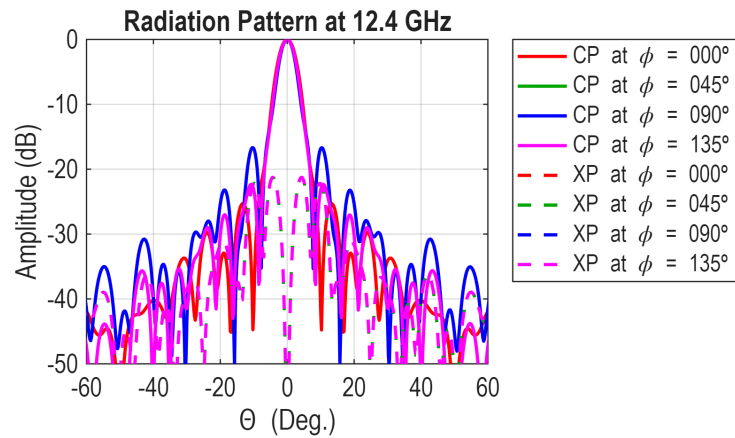
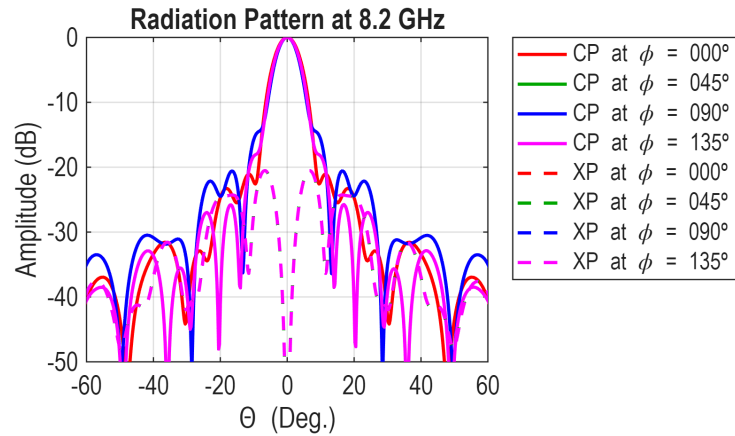
Dual Linear Polarized Lens Horn Antennas are especially useful when high gain is required with minimum size. Therefore, these antennas are widely used in radar applications, communication links and meteorological systems, among others. New cutting-edge space applications include LHA's for MiniSat, MicroSat, NanoSat and CubeSat communications.



ELECTRICAL SPECIFICATIONS

Parameter	Typical values
Frequency band	8.2 - 12.4 GHz
Return Loss	18 dB
Isolation	40 dB
Insertion Loss	0.5 dB
Crosspolar level	35 dB
Half Power Beam Width	5 °
Directivity	30 dBi





MECHANICAL SPECIFICATIONS

Parameter	Description
Vertical Port	WR-90 (22.86 mm x 10.16 mm)
Vertical Flange	UBR-100
Horizontal Port	WR-90 (22.86 mm x 10.16 mm)
Horizontal Flange	UBR-100
Size	531 x 372 x 362 mm
Weight	9300 g
Horn material	Aluminum
Lens Material	HDPE
External Color	Ruby Red
Surface treatment for antenna	Surtec 650
Surface treatment for bracket	Black anodized

Additional notes

All values are typical and simulated. Actual values could vary slightly. The return loss and the isolation of all items are checked before delivery to fulfill specifications.

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