CC450 Series

UHF Corporate Collinear

450-520 MHz

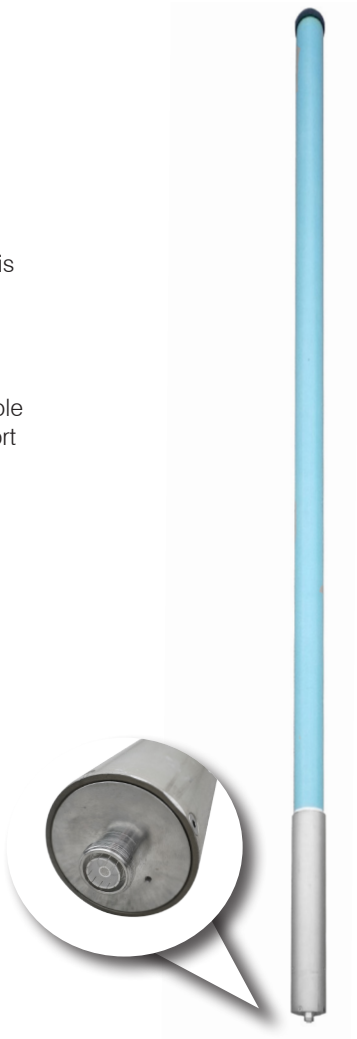
These low PIM collinear arrays allow site operators to combine, with complete integrity, a large number of communications services into a single, low profile collinear antenna array.

The true corporate feed of these arrays maintains total pattern integrity over a very broad operating bandwidth, similar to that previously available only in exposed dipole configurations. This is now achieved in the preferred form factor of a fully enclosed fiberglass radome. Like exposed arrays, the corporate collinear is a series of internally harnessed dipole sections but the corporate phasing does more than simply allow the antenna to be stable across the band. Precise control of the placement of the elements ensures phase purity. With every element placed physically and electrically at a theoretically perfect point, gain is maximized and side lobes reduced dramatically.

In a patent pending design approach the individual dipole elements are fabricated entirely of a flexible circuit board. Each dipole element, complete with it's impedance matching network, is integrated onto a single PCB ensuring precise circuit and dimensional control, the lowest possible radiation resistance and negligible weight. The dipole elements are soldered to the brass support pipe which contains the inter-element harnesses and is directly connected to the mounting tube and the lightning spike at the top of the antenna.

The result of this unique, incredibly strong design is:

- Extraordinary bandwidth characteristics with superior pattern control over an extended band coverage
- Strong vertical pattern beamwidth, with minor lobes >10dB down on primary lobe at all frequencies
- Light weight dipole construction with low center of gravity reducing tip deflection and sway
- **Industry leading PIM specifications maintained over the service life of the antenna**
- Attractive, low profile appearance antennas which are an immediatesubstitute for sites where wind loading or aesthetics make exposed dipole arrays less attractive
- Supremely strong radome and mounting tube construction to ensure low tower loadings even with radial ice
- DIN connectors standard with N type offered
- Sealed PTFE insulated cables in harnessing ensure high power capability



DIGITAL READY -150dBc PIM RATING

USA patent: 7,365,698

Australia patent: 2005904524

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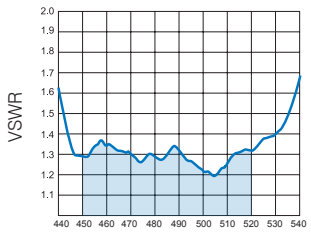
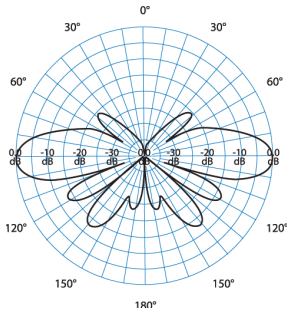
Electrical Specifications	
Model Number	**CC450-06**
Nominal Gain *dBd (dBi)*	5 (7.1)
Frequency *MHz*	450 -520
Tuned Bandwidth *MHz*	70
VSWR	<1.5:1
Nominal Impedance Ω	50
Vertical Beamwidth	15°
Horizontal Beamwidth°	Omni +/- 0.5dB
Input Power *Watts*	250
Passive IM 3rd order (2x20W) *dBc*	-150

Mechanical Specifications		
Model Number		**CC450-06**
Construction		Composite fiberglass sky blue radome aluminum mounting tube
Length *inches*		107
Radome Diameter *inches*		3
Weight lbs		22
Shipping Weight *lbs*		50
Shipping Dimensions *inches*	H	6
	W	6
	L	118
Termination		7/16" DIN fixed female
Mounting Area		20" x 3.5" diam. Aluminum
Suggested Clamps (not included)		UC1142
Projected area ft^2	No ice	2.3
	with ice	2.8
Lateral (Thrust) @ 100mph *lbs*		57
Wind Gust Rating *mph*		> 150
Torque @ 100mph *ft-lbs*		166

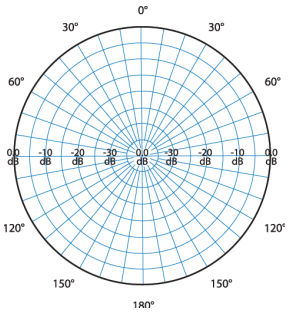
Typical VSWR Response (CC450)



Typical - E Plane



Typical - H Plane



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