

CC450 Series

UHF CORPORATE COLLINEAR

450-512 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.

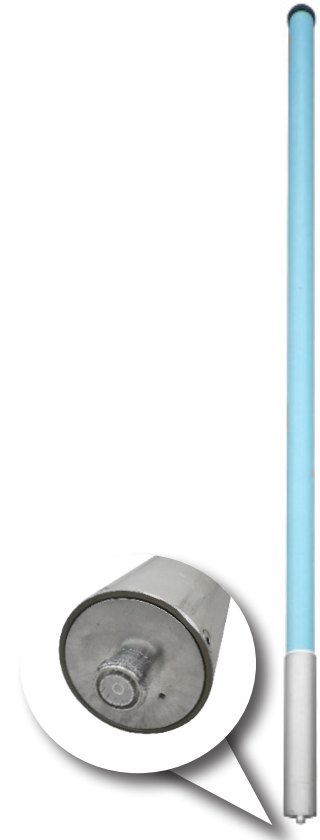
The true corporate feed of these arrays maintains total pattern integrity over a very broad operating bandwidth, similar to that previously available only in exposed dipole configurations. This is now achieved in the preferred form factor of a fully enclosed fiberglass radome.

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 immediate substitute 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
- Sealed PTFE insulated cables in harnessing ensure high power capability
- CC450-06 and CC450-09 field invertible (excludes tilt variants)



CC450 Series

USA patent: 7,365,698

Australia patent: 2005904524



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Electrical Specifications

Model Number	CC450-06	CC450-09	CC450-66
Nominal Gain dBd	6.0 (8.1)	8.5 (10.6)	2 x 6.0 (8.1)
Frequency MHz	450 - 512		
Tuned Bandwidth MHz	Full Band		
VSWR	>1.5 :1		
Nominal Impedance Ω	50		
Downtilt	0 std, -3, -6	0 std, -3, -6	Not Offered
Vertical Beamwidth	15°	8°	15°
Horizontal Beamwidth°	Omni +/- 0.5dB		
Input Power Watts	500		
Passive IM 3rd order (2x20W) dBc	-150		
Peak Instantaneous Power (kW)	25		

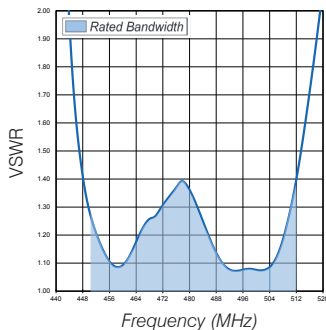
Mechanical Specifications

Model Number	CC450-06	CC450-09	CC450-66	
Construction	Composite fiberglass sky blue radome aluminum mounting tube			
Length m (inches)	2.9 (113)	5.2 (205)	5.4 (213)	
Radome Diameter m (inches)	77 (3)			
Weight kg (lbs)	10.0 (22)	24.5 (54)	25.5 (119)	
Shipping Weight kg (lbs)	15.4 (34)	34.0 (75)	36 (79)	
Shipping Dimensions m (inches)	H	11.5 (4.5)		
	W	11.5 (4.5)		
	L	3.1 (122)	5.4 (215)	5.6 (221)
Termination	7/16" DIN fixed female		7/16" DIN fixed female +DIN cable tail	
Mounting Area m (inches)	500mm x 89mm (20" x 3.5") diam. Ecofilm™ plated aluminium		750mm x 89mm (30" x 3.5") diam. Ecofilm™ plated aluminium	
Suggested Clamps (not included)	UC1142			
Projected area cm ² (ft ²)	No ice	2378 (2.6)	4615 (5)	4799 (5.2)
	with ice	2903 (3.1)	5843 (6.3)	6076 (6.5)
Lateral (Thrust) km/h (mph)	282 (63)	547 (123)	569 (128)	
Wind Gust Rating km/h (mph)	>240 (>150)			
Wind Gust Rating (with ice)	>240 (>150)			
Torque @ 160km/h Nm (100mph ft-lbs)	342 (252)	1232 (909)	1338 (987)	

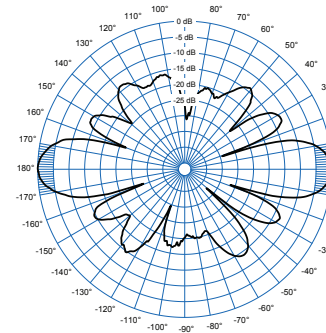
Note 1: pre-set down tilt versions of 3 and 6 degrees are available in the CC450-09 model. Simply add a -T3 or -T6 at the end of the model number to order the respective tilt variation. E.g. CC450-09-T3.

Note 2: The CC450-66 and all tilt variants are NON-INVERTIBLE

Typical VSWR Response (CC450-06)



Typical -E Plane



Typical -H Plane

