Band IV/V (UHF) Dipole Arrays 470 - 860MHz

Product Description

The UD series are vertically polarized antennas that are complementary to the CBS series of slot antennas. They are ideal for low power UHF TV transposer applications as well as higher power applications.
These dipole antennas are designed for broadband operation.
Construction is of aluminum and the antenna is housed within a fibreglass radome that has been designed to survive wind speeds of 240 km/h (150mph) to AS1170.2:2011. A range of dipole arrays, 4, 8, 12 and 16 bay, are designed for various gain requirements.
Dual inputs are standard on high power models and custom VRPs are available as optional extras on most models.

8UD-LP shown

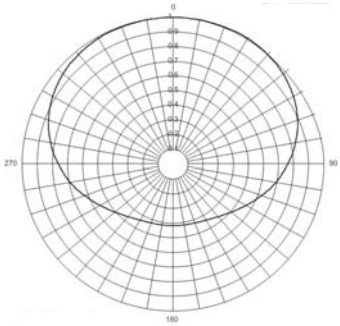
Features

- Broadband design for Digital TV or multi-channel use
- Low power models available in 3 versions: 470 - 650MHz, 520 - 720MHz, 620 - 860MHz
- High power models available in 2 versions: 470 - 650MHz, 620 - 860MHz
- Designed for maximum corrosion protection
- Vertically polarized
- Pressurized
- Low wind loading

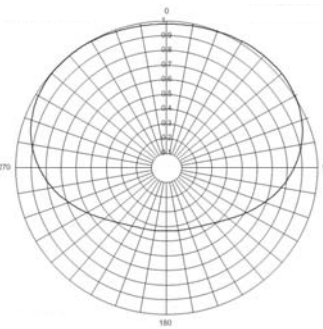
Specifications - Low Power

Model	4UD-LP	8UD-LP	12UD-LP
Frequency Range, MHz		470 - 860	
Number of Bays	4	8	12
Operating Frequency Ranges, MHz		470 - 650 / 520 - 720 / 620 - 860	
Polarization		Vertical	
Number of Channels		Multichannel	
Nominal Gain (Mid-band), dBd	8	11	13
Azimuth Radiation Pattern		Directional	
Beam Tilt	0, 0.8, 1.6, 3.2, 6.4	0.8, 1.6, 3.2, 6.4	0.8, 1.6, 3.2
Null Fill (minimum)	NA	1st Null 10% E/Emax	1st Null 10% E/Emax
Return Loss, dB		> 20 (across frequency range)	
Input Connector		7/8" EIA Flange	
Input Power Average (max), kW	1.8	2.0	2.0
Impedance, ohms		50 unbalanced	
Weight, kg (lb)			
Band IV	26 (57)	35 (77)	65 (143)
Band V	23 (51)	33 (73)	56 (123)
Radome Diameter, mm (in)*	220 (8.7)	220 (8.7)	220 (8.7)
Dimensions (Height), cm (in)			
Band IV	280 (110)	460 (181)	610 (240)
Band V	240 (94)	360 (142)	530 (209)
Mounting (Standard), mm (in)		8 x 20mm (3/4") bolts on a 292mm (11-1/2") PCD Flange	
Effective Area Front (full antenna), sq m (sq ft)	0.40 (4.3)	0.94 (10.1)	1.34 (14.4)
Design Wind Speed (max), km/h (mph)		240 (150)	
Wind Load @ 50 m/sec Front, kN (lb)	0.47 (110)	1.12 (250)	1.59 (360)
Pressurization Operational, kPa (psi)		10 - 25 (1.5 - 3.6)	
Pressurization Test, kPa (psi)		100 (15)	
Material - Radome		Fibreglass - White	

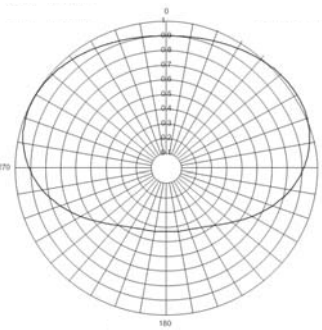
Patterns - Low Power



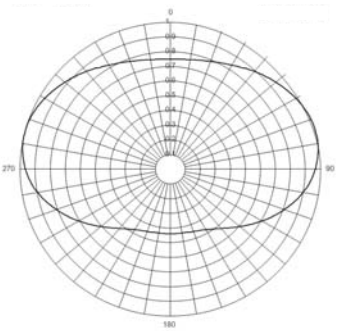
Typical Azimuth Radiation Pattern - 474MHz



Typical Azimuth Radiation Pattern - 602MHz



Typical Azimuth Radiation Pattern - 730MHz



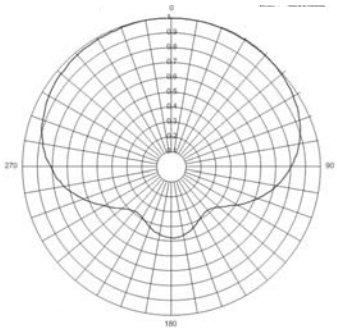
Typical Azimuth Radiation Pattern - 842MHz

Band IV/V (UHF) Dipole Arrays 470 - 860MHz

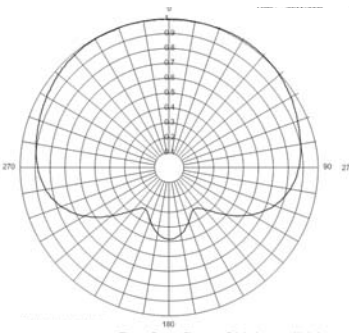
Specifications - High Power

Model	4UD-HP	8UD-HP	12UD-HP	16UD-HP
Frequency Range, MHz	470 - 860			
Number of Bays	4	8	12	16
Operating Frequency Ranges, MHz	470 - 650 / 500-700 / 620 - 860			
Polarization	Vertical			
Number of Channels	Multichannel			
Nominal Gain (Mid-band), dBd	8	11	13	14
Azimuth Radiation Pattern	Directional			
Beam Tilt	0, 1.6, 6.4	0.8, 3.2, 6.4	0.8, 1.6, 3.2	0.8, 1.6
Null Fill (minimum)	1st Null 10% E/Emax	1st Null 10% E/Emax, 2nd Null 5% E/Emax		
Return Loss, dB	> 20 across frequency range			
Input Connector	2 x 7/8", 1-5/8"	2 x 1-5/8" EIA (co-phased)		
Input Power Average (max), kW	2 x 2.0, 1 x 5.0	2 x 5.0	2 x 5.0	2 x 5.0
Impedance, ohms	50 unbalanced			
Weight (approx), kg (lb)	63 (139)	85 (187)	107 (235)	152 (334.2)
Radome Diameter, mm (in)*	320 (12.6)	320 (12.6)	320 (12.6)	419 (16.5)
Dimensions (Height or Length), cm (in)	240 (94.4)	422 (166.2)	604 (237.8)	787 (309.8)
Mounting (Standard), mm (in)	12 x 16mm bolts on a 438mm PCD flange			12 x 16mm bolts on a 515mm PCD flange. Dual flange embedded mount
Effective Area Front (full antenna), sq m (sq ft)	0.62 (6.7)	1.1 (12)	1.5 (16.2)	2.65 (28.5)
Design Wind Speed (max), km/h (mph)	240 (150)			
Wind Load @ 50 m/sec Front, kN (lb)	0.95 (214)	1.7 (382)	2.3 (517)	4 (900)
Pressurization Operational, kPa (psi)	10 - 25 (1.5 - 3.6)	10 - 25 (1.5 - 3.6)	10 - 25 (1.5 - 3.6)	See RFS for options
Pressurization Test, kPa (psi)	100 (15)			
Material - Radome	Fibreglass - White			
Wind load to AS1170.2:2011				

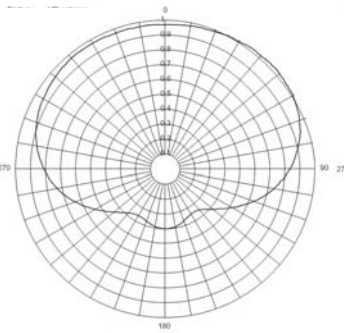
Patterns - High Power



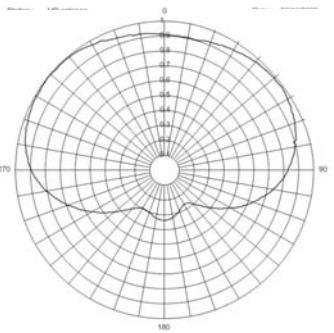
Typical Azimuth Radiation Pattern - 474MHz



Typical Azimuth Radiation Pattern - 602MHz



Typical Azimuth Radiation Pattern - 730MHz



Typical Azimuth Radiation Pattern - 842MHz

Ordering information