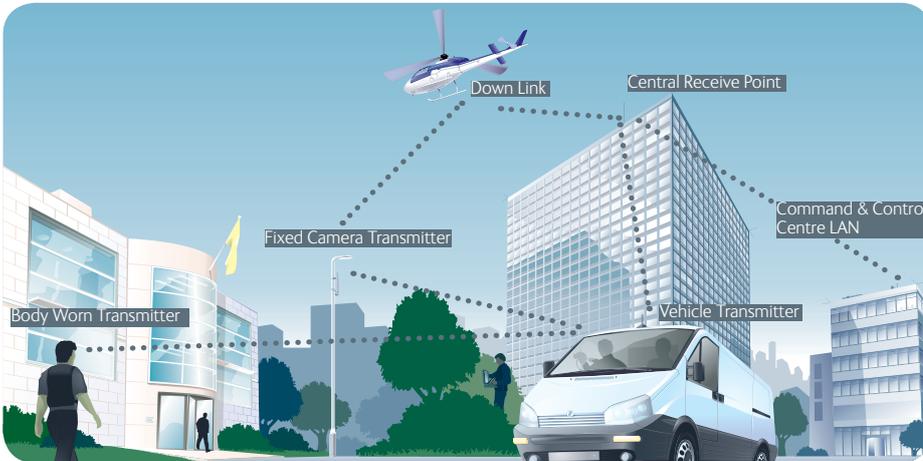


## 6-WAY MULTI SECTOR ANTENNA for COFDM



MSA6-2.4V/1795  
Miniature Multi  
Sector Antenna  
12 x 6.5 inches  
diameter (300 x  
155mm diameter)

Chelton Limited have designed a miniature Multi Sector antenna in the 2.0-2.7GHz band specifically for use with COFDM (Coded Orthogonal Frequency Division Multiplexed) radios.

COFDM provides significant benefits over conventional analogue microwave transmissions, especially in high multipath environments such as dense urban areas. It is possible to virtually eliminate Fade even in Non Line of Sight (NLOS) situations, through the use of spatial antenna diversity schemes.

For this reason COFDM systems are being used for National Security, Police and Military applications where it is vital that integrity of video and data links is maintained under the most imposing situations.

Model MSA6-2.4V/1795 has 6 antennas and is contained within a rugged housing which is only 6.5 inches diameter (155mm) x 12 inches tall (300mm).

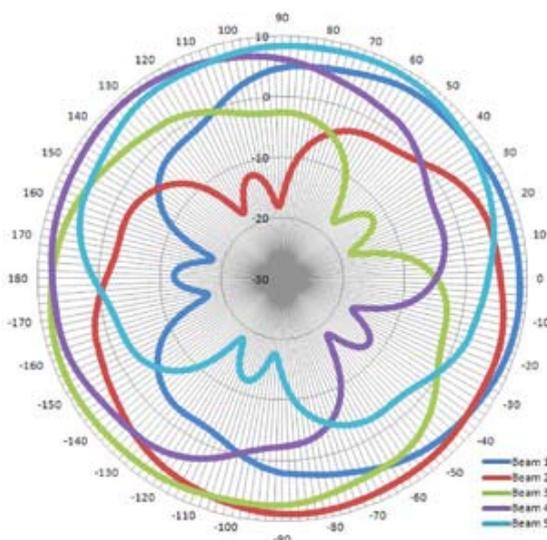
Five of the antennas are sector antennas, each has up to 9dBi peak gain and azimuth beamwidths of 120°.

They provide a high level of overlap so that the COFDM radio can practically use 3-4 sectors worth of data at any time for recombination, ensuring that even localized transient fading (especially associated with use in mobile applications) is eliminated.

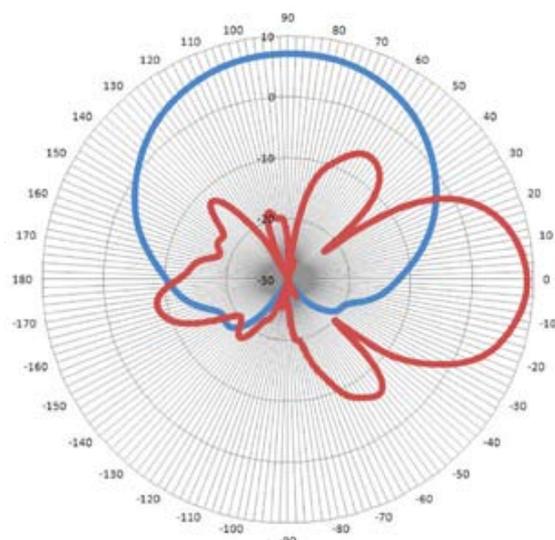
The sixth antenna is up-looking to provide complete hemispherical coverage. This increases the practical applications and maximizes operational flexibility for the antenna for rapid deployment as well as temporary and fixed installations.

- 2.0 to 2.7GHz for multiple applications
- Ensures optimum video integrity even when used at street level in NLOS situations
- Five sectors plus overhead for total coverage
- Rugged for mounting on vehicles
- Small for rapid deployment
- Helicopter-mount is possible
- Other frequency bands being developed

Azimuth patterns showing 9dBi peak gain, 120° beamwidth and high level of overlap for the five sector antennas



Elevation pattern showing one of the sectors and the overhead antenna providing complete hemispherical coverage



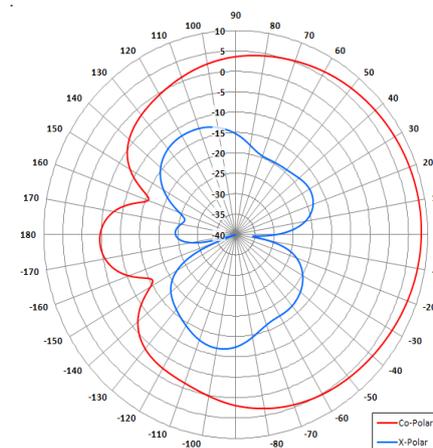
# MSA6-2.4V/1795

Multi Sector Antenna

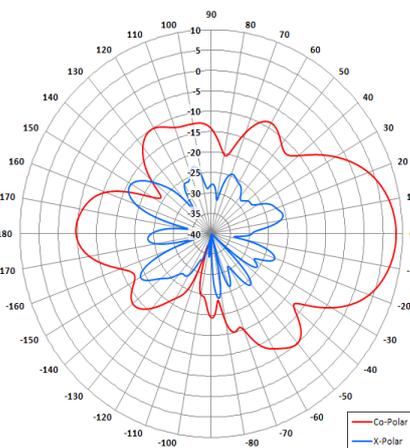


## Key Features

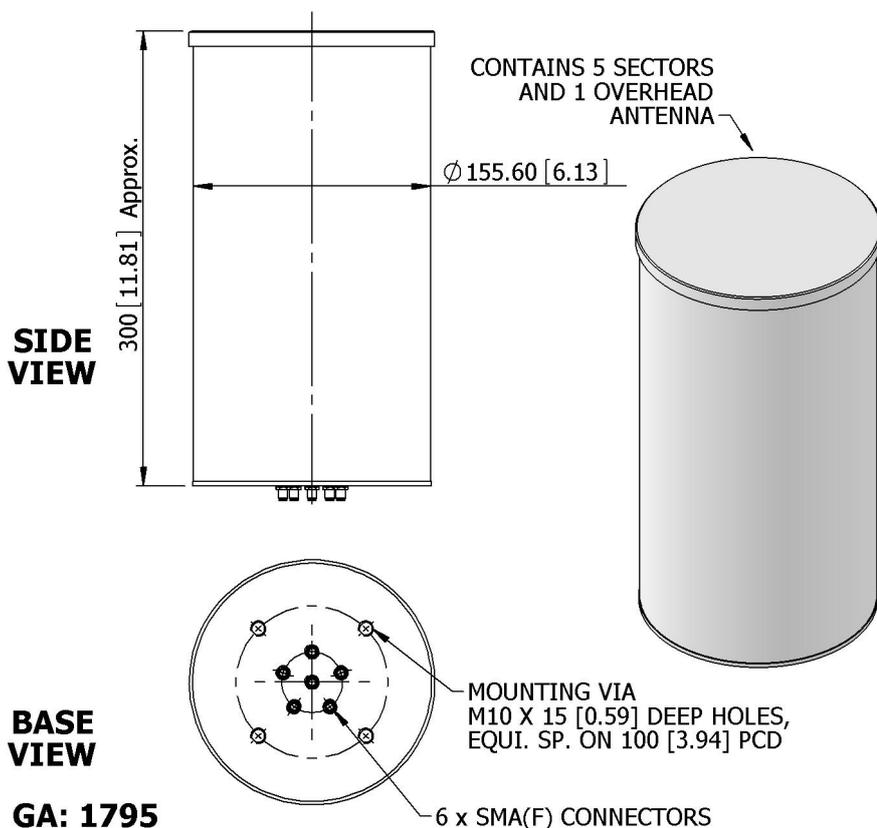
- Designed for COFDM Applications
- Azimuth Coverage - "5" Sectors
- Overhead Coverage - RHC Element
- Pattern - Omni Directional
- Wide Band
- Low Profile



Azimuth Pattern - Sector



Elevation Pattern - Sector



## ELECTRICAL

Frequency	2.00 - 2.70 GHz
Gain	8.0 dBiC (Sectors) Nom 8.5 dBiC (Overhead) Nom
Polarisation	Linear (Vertical) (Sectors) Right Hand Circular (Overhead)
Beamwidth	140° (Az) x 35° (El) (Sectors) 65° (Az) x 65° (El) (Overhead) Approx
Cross Polar	20 dB Typ (Sectors)
Axial Ratio	4 dB (Overhead)
VSWR	2:1 Typ
Power Rating	10 W
Front to Back	>10 dB

## MECHANICAL

Standard Finish	Gloss White
Mass	1.8 Kg (3.96 lbs)
Temperature	-20° to +50°C
Wind Loading	7.6 Kg (16.7 lbs) @ 100 mph

## MOUNTING OPTIONS

Kits Available	N/A
See separate data sheets	

## ADDITIONAL NOTES

Issued 100811

Chelton Limited has a policy of continuous development and stress that the information provided is a guide only and does not constitute an offer or contract or part thereof. Whilst every effort is made to ensure the accuracy of the information contained in this brochure, no responsibility can be accepted for any errors or omissions.

The copyright of antenna designs and images is copyright protected and owned by Chelton Limited.  
©Chelton Limited

For further information please contact: Chelton Limited, Lambda House, Cheveley, Newmarket, Suffolk CB8 9RG, UK.  
T: +44 (0)1638 732 177  
E: newmarket.sales@chelton.com  
W: www.chelton.com/microwave