

# 19-429P58SR

# CHELTON

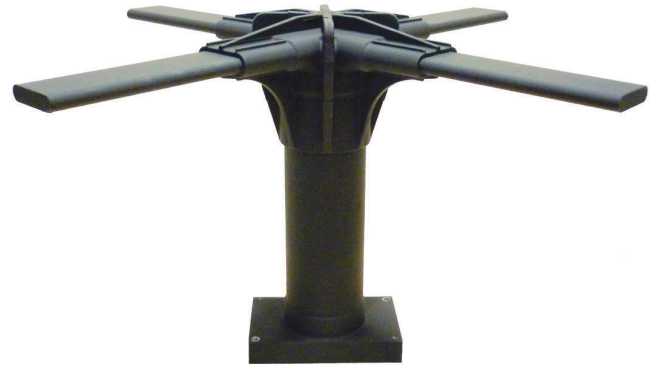
## UHF SATCOM Antenna

The 19-429P58SR UHF SatCOM Antenna is a combined low-high angle, low weight, high efficiency, UHF satellite communications antenna that is suitable for use in rugged vehicular applications.

The antenna comprises a cylindrical high strength mast, with a rectangular box-section base, supporting a pair of cross dipoles. High strength glass reinforced plastics (GRP) are used throughout the construction for strength, rigidity and lightness.

The 19-429P58SR provides hemispheric pattern coverage by means of two, independent, collocated elements built into a single shell.

Low angle (0 to approximately 45 ) coverage is provided by the vertical element and high angle (approximately 45 to 90 ) coverage is provided by the circularly polarised element. In this way, full hemispheric coverage is achieved.



### ENVIRONMENTAL

	MIL-STD-810E, Method 520.1, Procedure III
<b>Temperature</b>	Storage: -57 C to +85 C Operational: -54 C to +71 C
<b>Altitude</b>	Operational: 7620 m
<b>Humidity</b>	75% at 45 C
<b>Salt Fog</b>	MIL-STD-810E, Method 509.3, Procedure I 48 hours exposed to 5% salt solution
<b>Mechanical Shock</b>	MIL-STD-810E, Method 516.4, Procedures I and V 20 g 11 ms terminal sawtooth functional 40 g 11 ms terminal sawtooth crash safety
<b>Vibration</b>	MIL-STD-810E, Method 514.4, Procedure I Profile overleaf
<b>Magnetic Effect</b>	Less than 1 deflection at 300 mm

### ELECTRICAL

<b>Frequency Range</b>	Low Angle: 240 MHz - 400 MHz High Angle : 225 MHz - 400 MHz
<b>Gain</b>	Low Angle: Average within 2 dB of a quarter-wave monopole (+4 dBi typical) High Angle: +4.5 dBiC minimum (average full band)at zenith (+6 dBiC typical at zenith)
<b>Polarisation</b>	Low Angle: Predominantly vertical when mounted vertically High Angle: Right Hand Circular Polarisation (RHCP) at zenith
<b>Radiation Pattern</b>	Low Angle: Omnidirectional in azimuth Combined*: Hemispherical *Low/high angle combined
<b>Power Rating</b>	Low Angle: 100W max High Angle: 200W max
<b>Impedance</b>	50 ohm (nominal)
<b>VSWR</b>	Low Angle: 2.7:1 max High Angle: 2.0:1 max
<b>Isolation</b>	20 dB (mid-band)
<b>Connectors</b>	Low Angle: TNC Female High Angle: N Type Female

### MECHANICAL

<b>Height</b>	0.30 m
<b>Width</b>	0.49 m
<b>Weight</b>	1.43 kg
<b>Mounting</b>	4 holes fixed location



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