

Type 19-429MM

UHF SatCOM Antenna
225 MHz - 400 MHz

COBHAM

19-429MM-DS Issue 2

The most important thing we build is trust

The **19-429MM UHF SatCOM Antenna** is a magnetically mounting, combined low-high angle, low weight, high efficiency UHF satellite communications antenna which provides hemispheric pattern coverage by means of two independent collocated elements built into a single structure. The antenna is designed to be mounted onto the ferrous roof of a military wheeled vehicle.

The antenna comprises a cylindrical high strength mast, with a rectangular box-section base, supporting a pair of crossed dipoles. High strength glass reinforced plastics (GRP) are used throughout the construction for strength, rigidity and lightness. The base has an integral high strength magnet to interface with a ferrous mounting surface and also provides support for the two RF connectors.

The **19-429MM** 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.



Electrical Specification

Frequency Range	Low Angle: 240 MHz - 400 MHz High Angle: 225 MHz - 400 MHz
Gain	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)
Polarisation	Low Angle: Predominantly vertical when mounted vertically High Angle: Right Hand Circular Polarisation (RHCP) at zenith
Radiation Pattern	Low Angle: Omnidirectional in azimuth Combined*: Hemispherical *Low/high angle combined
Power Rating	Low Angle: 100W max High Angle: 200W max
Impedance	50 ohm (nominal)
VSWR	Low Angle: 2.7:1 max High Angle: 2.0:1 max
Isolation	20 dB (mid-band)
Connectors	Low Angle: TNC Female High Angle: N Type Female

Mechanical Specification

Height	336.55 mm
Width	487.68 mm
Weight	3.7 kg
Mounting	Magnetic base

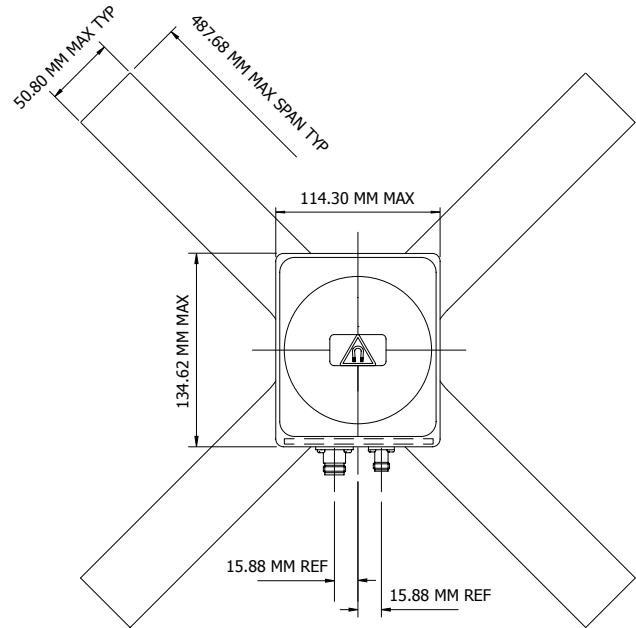
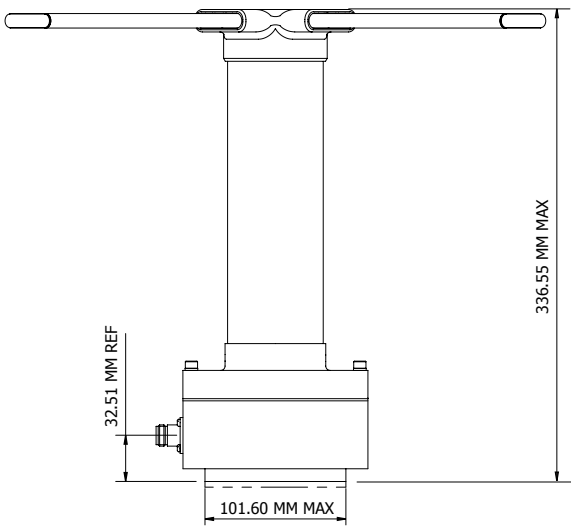
Environmental Specification

Temperature/Altitude/ Humidity	MIL-STD-810E, Method 520.1, Procedure III
Temperature	Storage: -57°C to +85°C Operational: -54°C to +71°C
Altitude	Storage: 9144 m
Humidity	75% at 45°C
Salt Fog	MIL-STD-810E, Method 509.3, Procedure I 48 hours exposed to 5% salt solution
Temperature Shock	MIL-STD-810E, Method 503.3
Vibration	MIL-STD-810E, Method 514.4, Procedure I, Category 8
Magnetic Influence	BS3G100, Part 2, Section 2

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For further information please contact:

Cobham Antenna Systems

The Cobham Centre

Fourth Avenue, Marlow,

Buckinghamshire, SL7 1TF England

Tel: +44 (0)1628 472072

Fax: +44 (0)1628 482255

Email: antennasystems.marlow.marketing@cobham.com

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