



Quadrifilar Circular Polarized Helix Omni Antenna

QHA-450

400-550 MHz

3 dBi Gain

Broad-Spectrum Omni-Directional FTS & UAV Jamming Performance: The Model QHA-450 is a highly versatile quadrifilar helix antenna engineered to provide continuous, high-efficiency signal coverage across the 400–512 MHz frequency band without requiring any manual field tuning. Operating with a typical gain of 3 dBi and a wide vertical beamwidth exceeding 100 degrees, this omni-directional circular polarization system is available in both Left Hand (LHCP) and Right Hand (RHCP) configurations to maximize signal penetration and suppress multipath interference. Integrating a specialized Teflon dielectric transmission line architecture, it easily manages a massive RF power handling capacity of 1000 Watts, making it an outstanding single-antenna solution for critical tasks such as tactical signal scanning, surveillance, multi-band communications, TETRA bands, and high-power UAV jamming applications across diverse ground-to-air defense links.

MIL-SPEC Tactical Vehicular Mounting and Durability: Built to withstand severe operational environments, the ruggedized QHA-450 features two pairs of vertical copper loop radiating elements completely enclosed in a high-strength, MIL-STD-810G compliant radome that mitigates wind loading up to 200 Km/Hr and limits the impact of ice formation. The mechanical blueprint incorporates a durable 6063T6 aluminum mounting base, an N-Female RF input termination sheltered safely beneath the base flange, and a compact 470 mm profile finished in standard tactical Olive Green (RAL 6003). For flexible theater deployment, this multi-use antenna supports rapid integration using standard fixed pole hardware or a NATO 4-hole flange vehicular mount, creating a resilient, low-profile footprint optimized for mobile tactical armor and permanent military base tracking installations.



Electrical Specifications:

Frequency Range	400 -512 MHz.
Gain	3 dBi. Typical
Bandwidth	70 MHz
Polarization	Circular – RHCP or LHCP
Input Impedance	50 Ohms
Radiation Pattern	Omni-directional
Beam-width –Half Power Points	100+ Degrees
VSWR – Better than	2.5:1
RF Power Handling Capacity	1000 Watts
Input Termination	N-Female

Mechanical Specifications:

Materials	6063T6 Aluminum & Copper
Mounting Hardware -Materials	High Grade Stainless Steel
Wind Rating	200 Km/Hr.
Overall Length	500 mm
Shipping Length	600 mm
Mounting Type	Pole/Mast/NATO or Customized
Enclosure Material	Fiber Glass
Final Finish/Color	Olive Green or Customized
Gross Weight Approx	5 Kgs.
Radome Materials	Fiberglass

Environmental Specifications:

Operating Temperature	(-)30 to +70 Degrees Celsius
Storage Temperature	(-)40 to +80 Degrees Celsius
Humidity	0 to 95% RH

Please contact us for further information like Azimuth & Elevation radiation patterns, Image and frequency Vs VSWR graph.