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 Watch deployment video



# HCT.

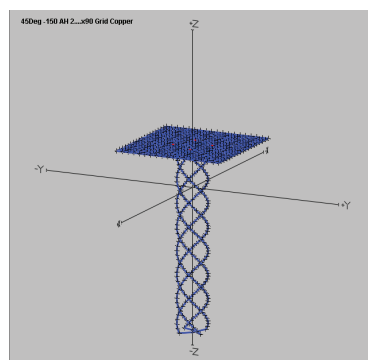
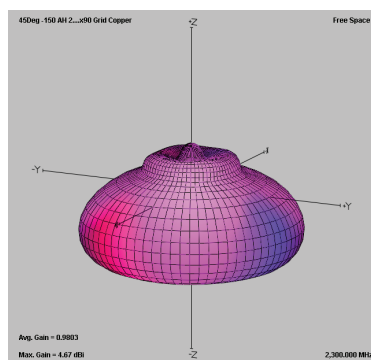
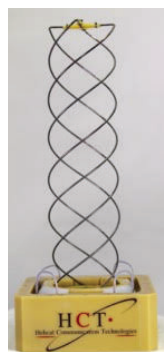
Helical Communication Technologies



This is the Helios Deployable Antenna, developed for small satellite applications. The Helios Antenna features a Quadrifilar Helical Antenna with an electrically powered method of deployment.

The Helios Antenna can be developed to operate from 400Mhz to 3000Mhz. The HCT Helios series of antennas can accommodate several operational purposes from near hemispherical coverage to narrow beamwidths, including ISO-FLUX beam patterns.

Quadrifilar Helical Antenna patterns can be arranged to be either right hand or left hand circularly polarized. Thus, having significant advantages over linearly polarized antennas. The antennas can be developed to reside in less than one-half of a 1U cube structure. This makes the innovative Helios Antenna appropriate for small satellite applications.



## L-Band Series

### Available Configuration

- RF antenna configuration
  - Quadrifilar Helical Antenna configuration

### Features

- Applications:
  - CubeSat TT&C
  - CubeSat RF Payloads
- Lefthand or Righthand Circular antenna polarization
- Dual Modular Redundant Release Mechanism
- Designed for combination with multiple Receiver/Transceivers
- Compatible with ISIS products and recent Pumpkin, ClydeSpace and GomSpace products
- Compliant to CubeSat standard

### Product properties

#### Specifications

RF Impedance (deployed): 50 Ohms  
 Max RF Power: 1 Watt  
 Frequency Range: 1290 to 1340 MHz (L-Band)  
 Electrical Power: 8 VDC at 7 Amps for 1 minute to deploy  
 Envelope Stowed (l x w x h): 100mm x 100mm x 35mm  
 Antenna Axial Height (deployed): 330mm  
 Supply Voltage: 8 VDC at 7 Amps for 1 minute to deploy  
 Operational Temperature Range: -40°C to 85°C  
 Antenna main beam gain: 3dBi+  
 Deployment Duration: 60-90s  
 Antenna Return Loss at resonance frequency: >10 dB  
 Power Consumption:
 

- Nominal: 0
- During Deployment: 8 VDC at 7 Amps for 1 minute to deploy

#### Price

\$11,000 per unit

#### Lead Time

90 days  
 And also available in 436MHz and 2.3GHz

#### Qualification

Qualified vibration and thermal testing completed by the Air Force Institute of Technology at Wright-Patterson Air Force Base, Ohio.  
 Space Rated by the United States Air Force

#### Interfaces

RF input/ output: MCX Coaxial Connector