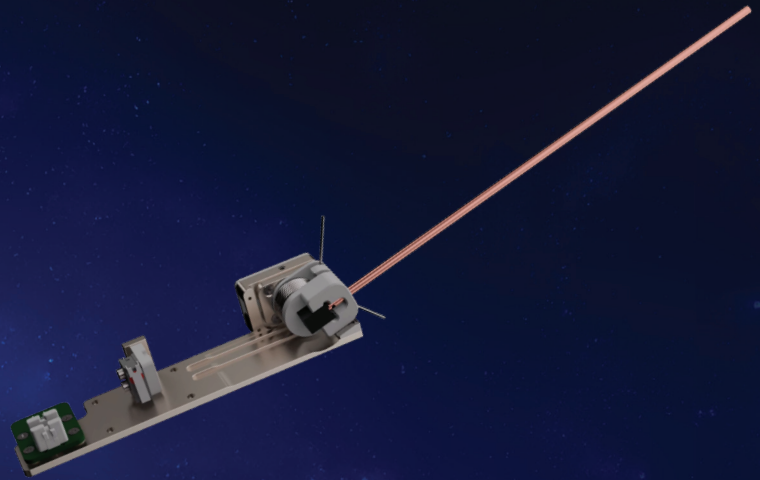


# **UHF DEPLOYABLE MONOPOLE ANTENNA**

## **Fail-Safe Deployment. Unbroken Connection.**

Engineered for critical TT&C links, featuring a patented stress-free mechanism that eliminates cable fatigue for ultimate mission reliability.

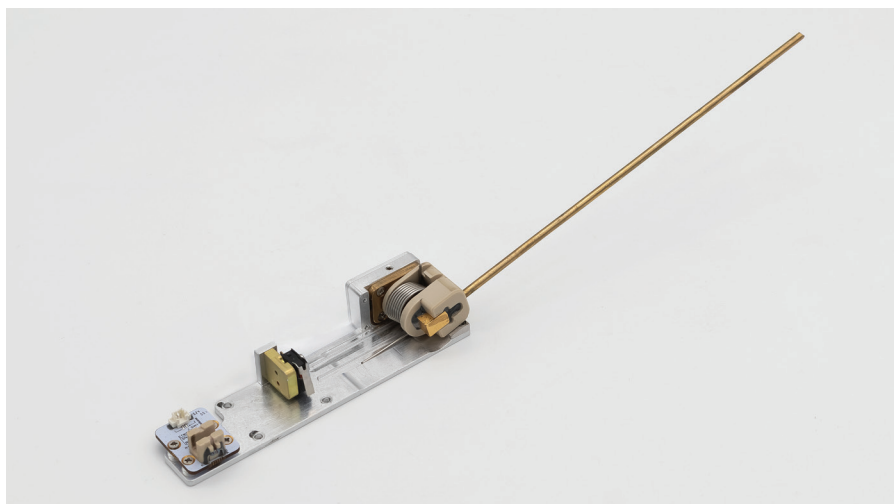
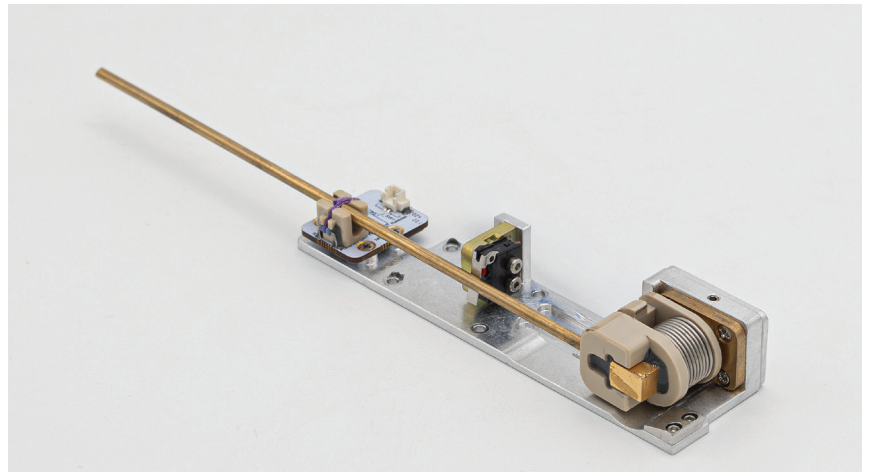


**Secure satellite's lifeline with the UHF Deployable Monopole Antenna, engineered for robust TT&C performance and dependable link availability, ensuring mission continuity from early orbit operations to routine on-orbit control.**

## **KEY HIGHLIGHTS**

Designed specifically for Telemetry and Telecommand (TT&C) operations in the 400-403 MHz band, UHF Deployable Monopole Antenna ensures continuous communication regardless of satellite orientation.

At the heart of the system lies a patented deployment mechanism. Unlike traditional designs where the RF cable rotates and twists, UHF Deployable Monopole Antenna's unique architecture keeps the RF feed stationary while the antenna deploys. This eliminates mechanical stress on the coaxial cable, ensuring superior reliability over the mission lifetime.

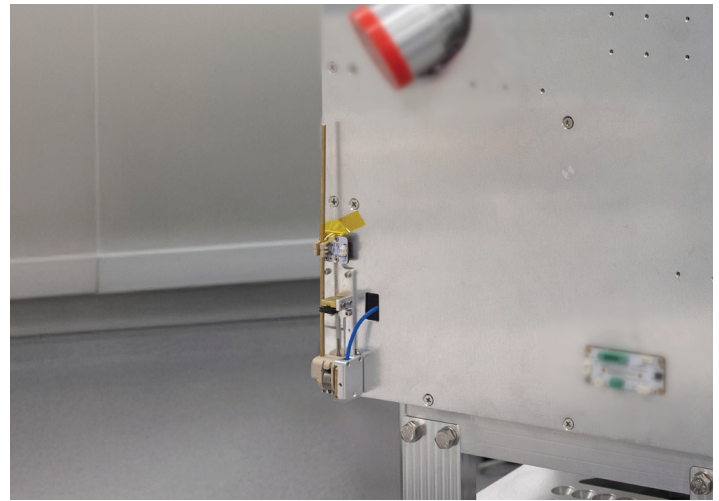


## **MISSION BENEFITS**

- ▶ **Proven Flight Heritage:** A flight-ready solution with established space heritage, offering low-risk integration for mission-critical operations.
- ▶ **Stress-Free Deployment:** The antenna rod rotates while the RF feed cable remains completely stationary, eliminating torsional stress and the risk of cable breakage.
- ▶ **Omnidirectional Coverage:** Provides a uniform radiation pattern (~0 dBi gain) to maintain link stability even if the satellite tumbles or loses attitude control.

## TECHNICAL FEATURES

<b>Frequencies</b>	400 - 403 MHz
<b>Peak Gain</b>	~ 0 dBi
<b>VSWR</b>	< 1.5:1
<b>Ports</b>	1x SMA Female
<b>Dimensions</b>	22x150x25 mm (Stowed Length) 22x330x25 mm (Deployable Length)
<b>Polarization</b>	Linear
<b>Deployment</b>	Applying 5V, approx. 8-10 seconds. (The redundant circuit design supports reliable deployment)
<b>Mounting</b>	4x M2.5 Screws



## HERITAGE / QUALIFICATION

### ► Deployment Life-Cycle Test

More than 100 successful deployments without performance degradation

### ► Post-Vibration Deployment

Verification performed

### ► Sine Burst Qualification

Axial 12G 20Hz 1s, Lateral 16.875G 20 Hz 1s

### ► Thermal Cycling Test

-40 °C to +85 °C, 10 Cycles

### ► Proven in Orbit

Flight heritage demonstrated on 1 Satellite

## STANDARDS & COMPLIANCE

### ► Environmental Verification

Compliant with NASA GEVS (GSFC-STD-7000)

