

# **UHF** **DEPLOYABLE** **DIPOLE** **ANTENNA**

## **Patented Deployment.** **Unfailing Connection.**

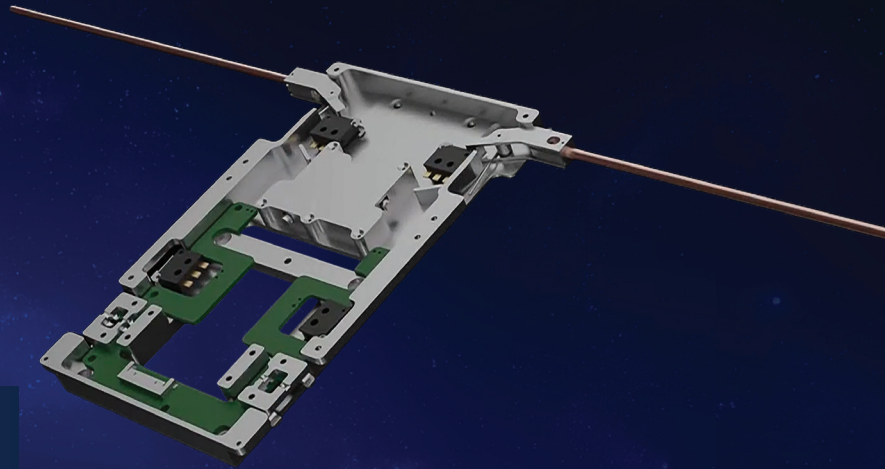
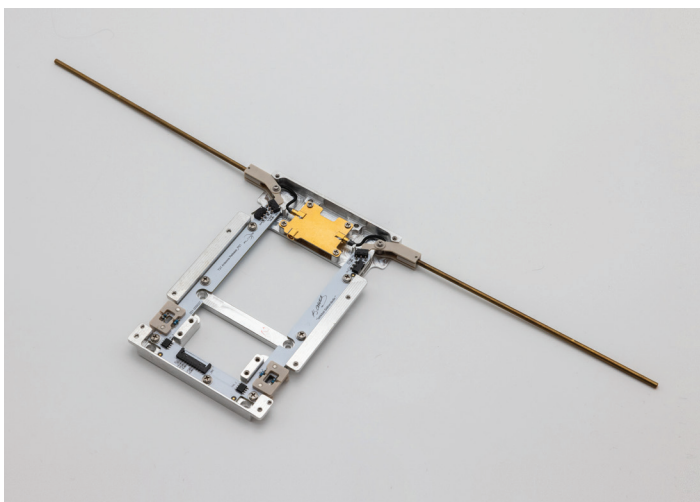
UHF Deployable Dipole Antenna combines superior dipole RF performance with a patented, stress-free mechanism that eliminates mechanical risks for ultimate mission reliability.

### **KEY HIGHLIGHTS**

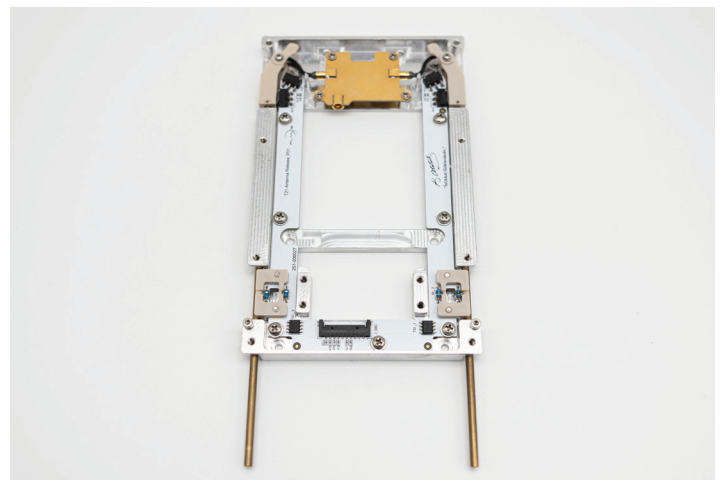
Achieving the superior RF characteristics of a dipole often comes with mechanical complexity—we have solved this challenge. UHF Deployable Dipole Antenna utilizes a patented deployment mechanism that completely isolates the RF feed from mechanical stress.

Unlike conventional designs where cable fatigue can jeopardize the mission, UHF Deployable Dipole Antenna's innovative architecture ensures that the feed lines remain stationary while the antenna elements deploy.

This "stress-free" approach, combined with flight-proven materials, delivers the ultimate reliability for Telemetry and Telecommand (TT&C) subsystems.



**Engineered for missions where failure is not an option. The UHF Deployable Dipole Antenna is designed to turn one of the most failure-prone moments in a mission into a source of confidence.**



### **MISSION BENEFITS**

#### **◆ Proven Flight Heritage**

A TRL-9, flight-ready solution with established space heritage, offering a low-risk primary communication link for critical operations.

#### **◆ Stress-Free Actuation**

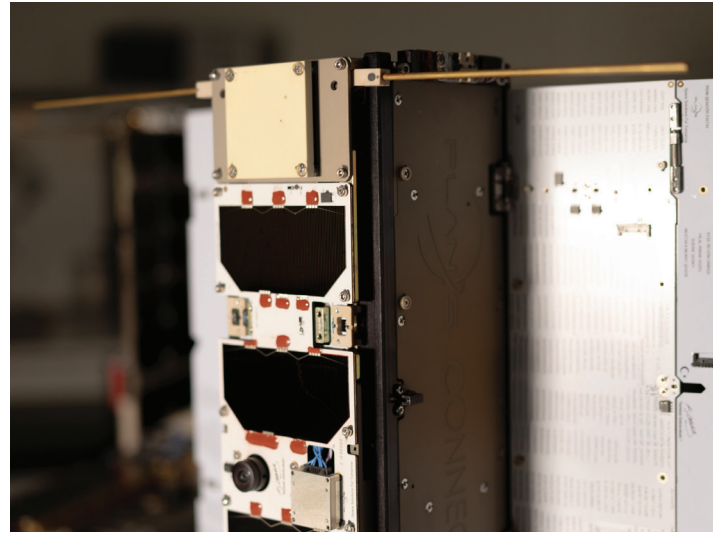
Features a unique system where RF feed cables remain stationary during deployment, eliminating the risk of disconnection or torsional fatigue.

#### **◆ Superior Dipole Performance**

Provides ~2 dBi peak gain and stable radiation patterns, ideal for platforms requiring higher performance than standard monopoles.

## TECHNICAL FEATURES

<b>Frequencies</b>	400 - 403 MHz
<b>Peak Gain</b>	~ 2 dBi
<b>VSWR</b>	< 1.5:1
<b>Ports</b>	1 x SMA Female
<b>Dimensions</b>	143x86x11 mm (Stowed Length) 143x363x11 mm (Deployed Length)
<b>Polarization</b>	Linear
<b>Deployment</b>	Applying 5V, approx. 8-10 seconds. (The redundant circuit design supports reliable deployment)
<b>Mounting</b>	8 x M2.5 Screws



## HERITAGE / QUALIFICATION

### ► Deployment Life-Cycle Test

More than 100 successful deployments without performance degradation

### ► Post-Vibration Deployment

Verification performed

### ► Random Vibration Qualification

14.1 gRMS (20-2000 Hz), 3 min per axis (X, Y, Z)

### ► Thermal Cycling Test

-40 °C to +85 °C, 10 Cycles

### ► Proven in Orbit

Flight heritage demonstrated on 3 Satellites

## STANDARDS & COMPLIANCE

### ► Environmental Verification

Compliant with NASA GEVS (GSFC-STD-7000)

