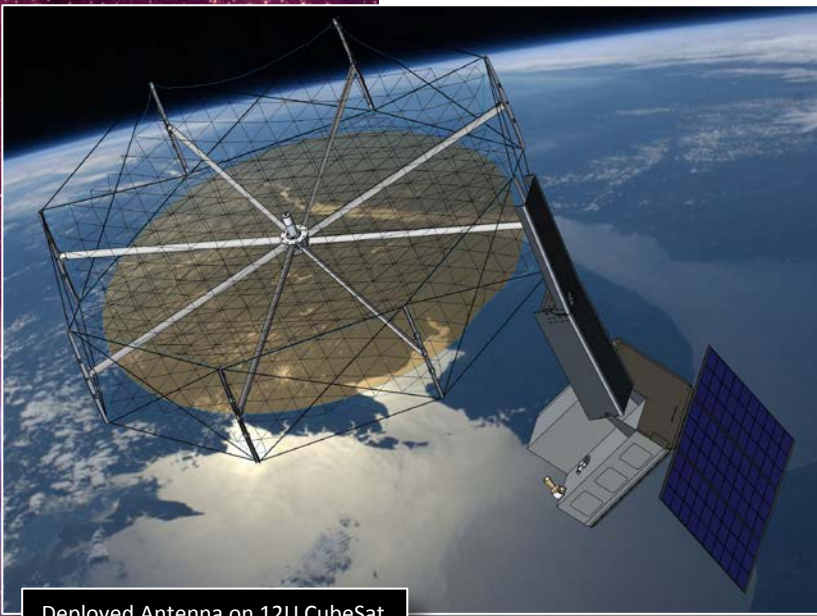


# KaTENna

## Deployable High Gain Antenna For Small Satellites

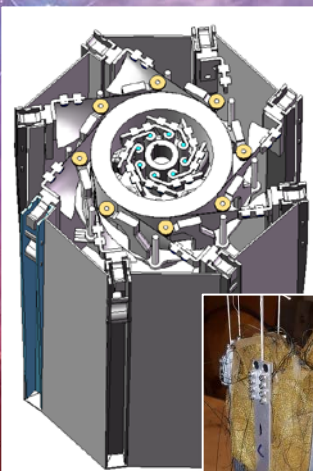
- 3U Form Factor
- >50 dBi Antenna Gain
- Offset Fed
- Multiple Horn Option



Deployed Antenna on 12U CubeSat

## Key Features

- Effective aperture = 1m (Baseline design)
- Directivity = 50 dB at 36 GHz
- Mass = 2.5 kg (reflector, boom and feed)
- Packaged volume = 3U (10x10x30cm)
- Offset fed,  $f/D = 0.75$
- Multiple feed options
- Scalable to 2-4m apertures
  - Can be center fed
- Applications
  - RF Communications
  - Active radar (weather, SAR)
  - Radiometer (ocean surface winds)
- Engineering unit with mesh completed
  - Packaging, deployment, surface repeatability shown
- Proto-Flight completion November 2017
  - Deployment repeatability testing
  - RF testing at 35.75 GHz
- Patent Pending



Stowed Antenna



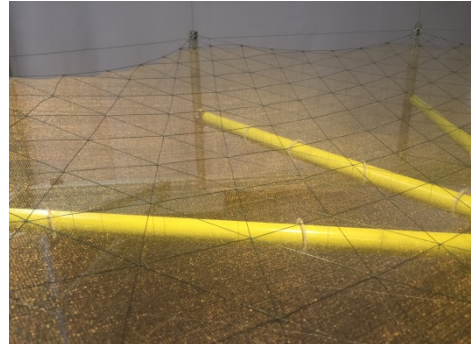
# TENDEG

# Performance Specifications

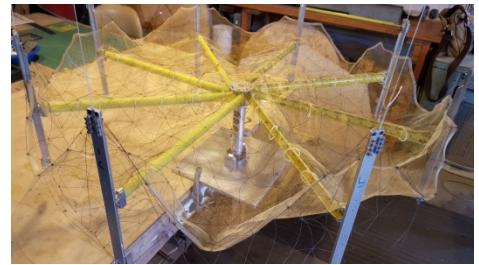
Metric	Units	Specification
Stowed Size	cm <sup>3</sup>	10 x 10 x 30 (3U)
Deployed Aperture	cm	100
Directivity (@ 36GHz)	dB	>50
Beamwidth (3dB)	degrees	0.7
Sidelobe Level	dB	< 17
XPD	dB	> 23
RMS Surface Accuracy	mm	0.28
Mass	kg	2.5
Thermal	°C	-20 to 85



Engineering Unit Deployed



Engineering Unit 36 OPI Mesh Close-up



Antenna Deployment Sequence

## About Tendeg

Tendeg LLC provides antennas, precision deployable structures, and mechanical engineering design and analysis services for space missions. The company was founded in 2015 by a group of space industry veterans with an average of 22 years experience in designing and building space flight hardware. Tendeg has offices near Denver, Aspen, and Los Angeles.

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ANTENNAS & PRECISION DEPLOYABLES FOR SPACE