

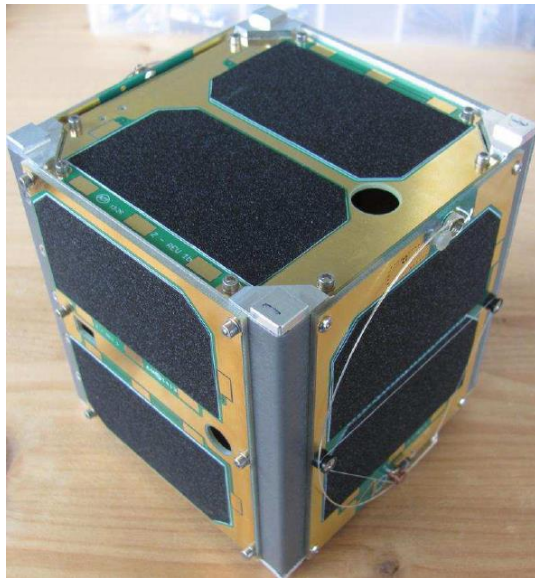
# Radio Amateur Satellite Corporation (AMSAT)

## *Fox-1 CubeSat Public Summary*

### Overview

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The mission of the Fox-1 satellite is to provide a wide-area, amateur radio communications capability that can be accessed using very simple ground station equipment such as a handheld FM transceiver paired with a small, handheld beam antenna. The satellite communications transponder will employ analog, narrow-band FM like that typically used on the amateur radio VHF and UHF bands. The satellite is expected to support the primary mission for at least 5 years in orbit.



**Fox-1 engineering prototype showing camera opening in +Z solar panel**

To further Science, Technology, Engineering, and Math (STEM) education the satellite is to host three experiment payloads developed by university students. The radio communications capabilities of the satellite will be used to uplink control commands for the experiments as needed and to downlink data collected from the experiments to ground stations.

The camera experiment licensed in this application, provided by students at Virginia Tech, will take visible light images as viewed from the +Z axis of the magnetically stabilized satellite using a commercial-off-the-shelf 640x480 pixel CMOS camera (OmniVision OV7670 camera chip). The images will be downlinked to amateur radio stations worldwide, at a rate of approximately one image per minute.

### Partnerships with Universities

Fox-1 the first in a series of satellites which are being developed in partnership with universities. AMSAT's goal is to provide a communications platform and avionics bus that will allow up to four STEM payloads to be flown on one CubeSat.

### Contact Information

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