



# MAGICBus

## Maryland Aerospace General-Purpose Instrumentation Carrier

MAI's low-cost micro-satellite provides communications encryption, propulsive station-keeping capability, accurate attitude control, and pointing accuracy, all in a small package; the small form factor enables launch as a secondary payload, making both spacecraft and launch very affordable.

Our electro-optical imaging configuration provides imagery in near-real time. Featuring a 10-inch aperture, the Optical Imaging Micro-Satellite can be tasked to capture an image of a designated ground object and relay that image to a mobile ground station. It can complete the task in a single pass or within a 10-minute tasking-to-product cycle.

### Specifications

Performance Item	Specification
Dimensions	[15 x 15 x 38] in to [18 x 18 x 42] in
System Mass	50 kg to 102 kg
Pointing Control	$\pm 0.15^\circ 3\sigma$
Pointing Knowledge	$0.01^\circ 3\sigma$
Slew Rate	$3^\circ/\text{sec}$
Transmitter	>10W, S-Band
Downlink	>1.0 Mbps
Encryption	Software Encrypted
Delta-V	650 m/s ( $\text{N}_2\text{H}_4$ ) to 16 m/s (Nitrogen cold gas)
Baseline Payload (for 50 kg configuration)	
Telescope	10 in aperture
GSD at 500km	1.5m
Field of Regard	$\pm 30^\circ$ roll from nadir
Image Size at 500 km	$\sim 4 \times 6$ km
Imaging Capability	600 images on-board storage