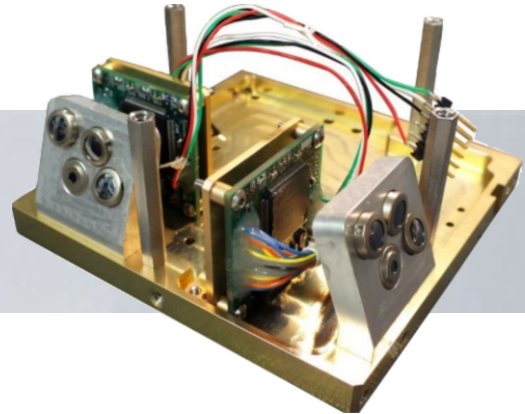


IR Earth Horizon Sensor



The MAI-SES is a miniature Static Earth Sensor suitable for CubeSats, NanoSats, and larger spacecraft in Low Earth Orbit.

The MAI-SES without a full enclosure is approximately 4.33 x 3.18 x 2.07 cm in volume. It is designed to be mounted inside a MAI-400 unit but can be independent of the MAI-400. The sensor has four thermopile detectors, which view the Earth, Space, and Earth limb and measure the dip angle with respect to the horizon. Two sensor heads mounted orthogonally are required to yield the nadir vector in the body frame.

The MAI-SES is a companion product to the MAI-400, which provides full orbit attitude knowledge in both Sunlight and Umbra.

The ADACS Experts

Over 150 delivered and counting
21+ Years On-Orbit

Specifications

Length: 4.33 cm

Width: 3.18 cm

Height: 2.07 cm

Mass: 33 g

Operating Voltage: 3.3 V

Operating Current (per Sensor): 40 mA

Coarse Field of View: 60 degrees

Resolution (Coarse Field of View): >1 degree

Fine Field of View: >7 degrees

Resolution (Fine Field of View): >0.25 degrees

Command and Telemetry: 12C or SCI (3.3 V)

Launch Environment: >12 G rms

MAI-400

ADACS
Attitude Determination
and Control System

