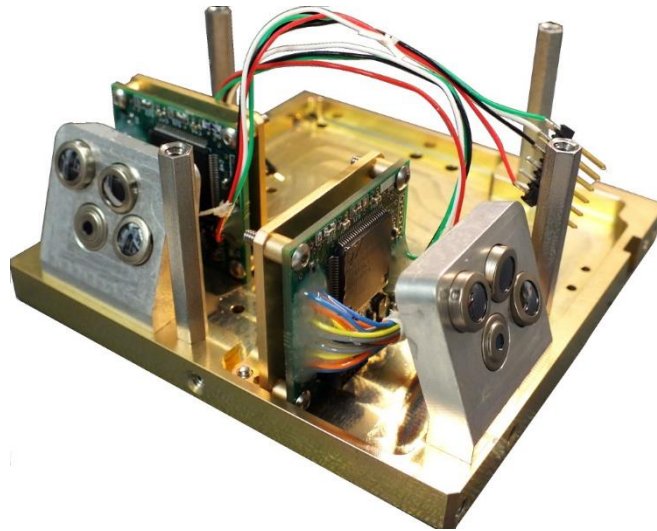


MAI-SES



Static Earth Sensor Product Specification

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 1.703" x 1.250" x 0.813" 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.

Specifications

| Performance Item | Unit | Specification |
|-----------------------------------|------------|--------------------|
| Length | Inch | 1.703 |
| Width | Inch | 1.250 |
| Height | Inch | 1.250 |
| Mass | grams (Oz) | 33(1.16) |
| Operating Voltage | V | 3.3 |
| Operating Current (per Sensor) | mA | 40 |
| Coarse Field of View | Degrees | 60 |
| Resolution (Coarse Field of View) | Degrees | >1 |
| Fine Field of View | Degrees | >7 |
| Resolution (Fine Field of View) | Degrees | <0.25 |
| Command & Telemetry | | I2C or SCI (3.3 V) |
| Launch Environment Vibration Spec | G rms | >12 |