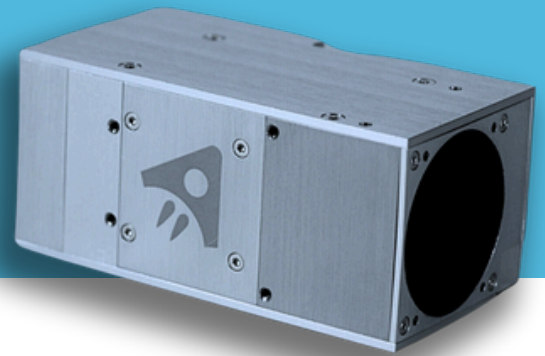




# Precision Aerospace Solutions

## SAGITTA STAR TRACKER

The **Sagitta Star Tracker** offers arcsecond range pointing accuracy to your CubeSat. The custom algorithms are optimized for accuracy, robustness and low computational cost. The star tracker has a built-in baffle to reduce the effect of stray light. The system is compact and easy to interface in CubeSats and large satellites. The flight heritage is successfully demonstrated in several missions on different types of platforms.



### STAR TRACKER FEATURES

#### Performance

- Cross-boresight accuracy: 2" ( $1\sigma$ )
- Around boresight accuracy: 10" ( $1\sigma$ )
- Tracks stars up to magnitude 6.2
- Tracks up to 64 stars Update rate of 10 Hz
- Field of view: 25.2°
- Autonomous calibration
- 

#### Features

- Star tracking and attitude determination
- Full image download capability
- Image histograms
- Fast lost-in-space algorithm

#### Power consumption

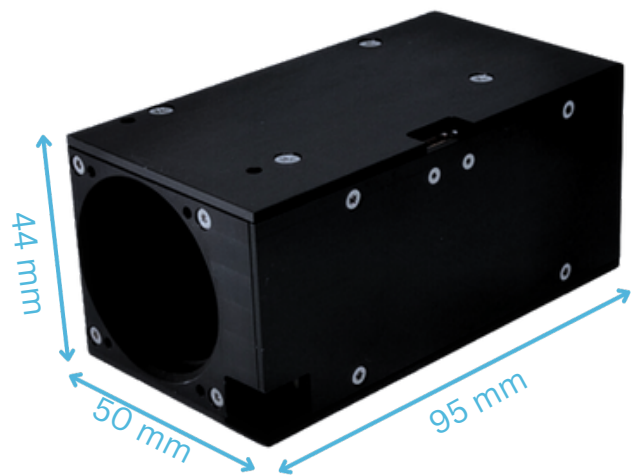
- Nominal: 1500 mW

#### Interface

- RS485
- +5 V
- Mass: 270 g
- Alignment cube for integration

#### Robustness

- Lost-in-space availability: >99% of the night sky
- Discards vast majority of false star instances
- Autonomous detection and correction for outlier stars
- Baffle sun rejection angle: 40°
- Radiation shielded lens
- Electronics are radiation tested
- Flight Heritage (>10 units)

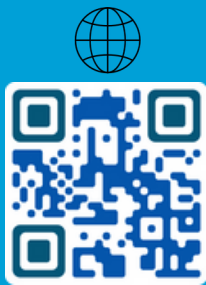




# Precision Aerospace Solutions



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## Arcsec's Remarkable Achievements in Perspective

**<0.2s** LISA Solution time

Robust attitude solutions at 10Hz after short acquisition time.

**2** Interplanetary star trackers

Two Twinkle star trackers will visit an asteroid on the Hera mission.

**375** Twinkles in a box

Number of Twinkle star trackers you could put in a 6U CubeSat. Although it might be excessive.

**+2000** Hours

Number of hours both Sagitta and Twinkle gather real sky data each year at our La Palma site.