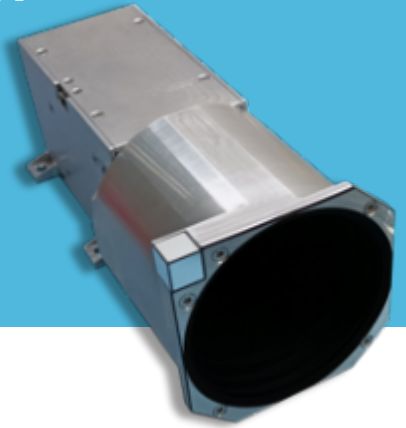


# Precision Aerospace Solutions



## SCORPIO STAR TRACKER

The **Scorpio Star Tracker** offers arc second range pointing accuracy to SmallSats. 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 electronics are designed for high radiation tolerance.



### 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 7 Hz
- Field of view: 24.8°
- Autonomous calibration

#### 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: 30°
- Radiation shielded lens
- Electronics are radiation tested

#### Features

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

#### Power consumption

- Nominal  $\approx$  2000 mW

#### Interface

- RS485
- +5 V
- Mass: 450 g
- Alignment cube for integration

