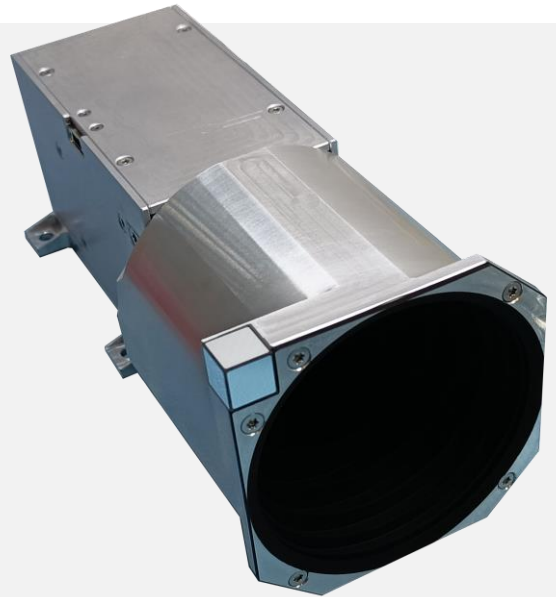


# SCORPIO STAR TRACKER

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 6.5
- Tracks up to 64 stars
- Update rate of 7 Hz
- Field of view: 24,8°
- Autonomous calibration

### 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

- ✓ High Accuracy
- ✓ High Robustness
- ✓ Easy Interfacing

### 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

