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TWINKLE STAR TRACKER

The Twinkle Star Tracker offers arc second range pointing accuracy to your CubeSat. The custom algorithms are optimized for accuracy, robustness and low computational cost. The star tracker is extremely compact and easy to interface in CubeSats and large satellites. Due to its small size, several can be mounted under different angles to improve the accuracy.

Star Tracker Features

✓ High Accuracy
✓ High Robustness
✓ Easy Interfacing

Performance

- Cross-boresight accuracy: 3″ (1σ)
- Around boresight accuracy: 30″ (1σ)
- Tracks stars up to magnitude 7
- Tracks up to 64 stars
- Update rate of 10 Hz
- Field of view: 10,6°
- Autonomous calibration

Features

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

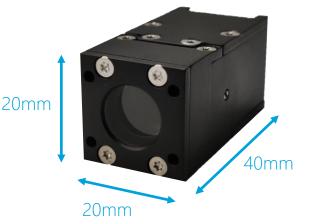### Power consumption

- Nominal: ≈1000 mW

Interface

- RS485
- +5 V
- Mass: 35 g

Robustness

- Lost-in-space availability: >99% of the night sky
- Discards vast majority of false star instances
- Autonomous detection and correction for outlier stars
- Radiation shielded lens
- Electronics are radiation tested

20mm
40mm
20mm

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