MICRO STAR SENSOR

Arcsecond-class attitude sensing for small satellites

PYXIS SPACE is a young and innovative supplier for the small satellite sector, committed to the New Space philosophy of fast, cost-efficient, and reliable development. The company builds on more than 15 years of heritage in satellite technology and provides compact, high-performance solutions tailored to the needs of research institutes, universities, and commercial missions worldwide.

The Micro Star Sensor is our most precise product, designed for demanding small satellite missions where attitude determination in the low double-digit arcsecond range is required. It skillfully combines high accuracy with a compact form factor and low power consumption, making it the ideal solution for missions with strict performance and resource constraints. Thanks to New Space manufacturing methods, the sensor is particularly cost-effective and can be produced in large quantities, making it an optimal choice for satellite constellations.

FEATURES

- Attitude determination with 12″ accuracy
- In-orbit calibration capability
- Robust algorithms with space debris detection
- Low power consumption
- Cost-efficient manufacturing
- Short delivery time

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SPECIFICATIONS OF FOUR HEAD COFIGURATION

Accuracy, 3σ: - **cross boresight** - **boresight**	 12“ 65“
Data Rate	up to 4 Hz, no initial acquisition time needed
Slew Rate	up to 2 °/s
Sun / Earth Exclusion Angle	40° / 32° for each sensor head
Interface	CAN 2.0B, RS232
Power Supply	+4.5 V to +12 V
Power Consumption (typ./max.)	600 mW / 1200 mW
Mass	230 g
Dimensions	60 x 64 x 90 mm^3
Environment	-40 °C to +40 °C (operational) -40 °C to +80 °C (survival)
Radiation	10 kRad

OPTIONS

- Controll box for up to 6 sensors
- EGSE hard- and software
- Star field simulator
- Image download

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