

MAI-SS Space Sextant

Low Cost Miniature Star Tracker

Stock #: MAI-000-00000010



The MAI-SS Star Tracker is low in cost and intended for CubeSat and NanoSat missions. The unit is completely self-contained and features lost in space star identification. Just apply power and begin receiving quaternions accurate to about 0.0042°. The tracker can be operated without a baffle with sun exposure controlled by operations, or with a baffle. The baffle design is based on successful missions with larger trackers and validated optical methods. It is approximately 5” long, and so is not used for most CubeSat applications. The MAI-400 ADACS system contains algorithms to provide sun avoidance for baffle-less operations.

Specifications

Performance Item	Specification
Accuracy (Cross boresight)	0.0042°
Acquisition Time	<0.5 sec
Max Tracking Rate	>1.0°/sec
Update Rate	2 Hz (current, 4 Hz goal)
Star Catalog	6.0 VM
Operating Temperature	-20 to 60 °C
Weight (inc. housing)	374.7 g
Dimensions	5.72 x 6.30 x 6.99 cm
DC Voltage	5.0 V
Peak Current	0.7 A
Average power consumption	1.5 W (current, 1.0 W goal)
Serial Interface	UART TTL, RS-232, RS-422

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