

STAR TRACKER

ST-16HV Data Sheet High-Volume Star Tracker

Version 3.1 – 2024-08-02



ABSOLUTE ACCURACY	7 arcsecond cross-boresight (RMS) 70 arcsecond around boresight (RMS)
MAXIMUM SLEW RATE	Up to 3 deg/s
LENS	COTS-grade optical solution
OUTPUT SOLUTION	Up to 5 Hz (standard 2 Hz) Built-in catalogue and processing Full lost-in-space solution every frame Zero initial acquisition time Internal corrections for proper motion and stellar aberration
COMMAND / TELEMETRY	RS-485, redundant half-duplex or full-duplex
SUPPLY VOLTAGE	9V to 34V (nominal 28V)
POWER CONSUMPTION	Average: < 0.5 W Peak: 1.0 W
ENVIRONMENT	Thermal: -40°C to +48°C (operating), -40°C to +88°C (survival) Vibration: 18.69 gRMS
RADIATION	TID: 18 krad (board level) Heavy Ion: Up to 60 MeV·cm ² /mg
HERITAGE	1 unit on orbit since early 2024. Common electronics and software to ST-16RT2, with 164 units across 3 generations and cumulated 525 years of heritage since 2013.

	LARGE BAFFLE	SMALL BAFFLE
FOV	7.5° x 10° half-angle	7.5° x Ø 8° half-angle
Sun Avoidance	22° sun-to-boresight	34° sun-to-boresight
Moon Avoidance	Demonstrated orbital operation with full moon in FOV	
Dimensions	Ø 97 x 120 mm	62 x 56 x 67.5 mm
Total Mass	268g	188g