



HYPERION TECHNOLOGIES

ST400 Star Tracker



DESCRIPTION

The ST400 Star Tracker is a standalone, low mass, low power star tracker, which renders attitude determination capability to small satellites. It has been jointly developed by Hyperion Technologies B.V. and Berlin Space Technologies GmbH.

The ST400 is an improved version of the smaller ST200 star tracker, which is aimed at applications in pico- and nano-satellite platforms. It features increased attitude determination accuracy and increased radiation tolerance. The ST400 has been qualified for man-rated missions since October 2013 and has flight heritage since Q4 2015.

HIGHLIGHTS

- Attitude determination accuracy (3σ):
 - < 10 arcseconds pitch and yaw
 - < 120 arcseconds roll
 - 5 Hz update rate
 - RS422/RS485 bidirectional interface.
 - All components passed radiation qualification at 11 krad (Si)¹
 - Plug-and-play ready design
 - Various baffle options available on demand
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- Low mass: 280 g
 - Low power: < 700 mW
nominal power consumption when running at 5Hz update rate
 - Outer dimensions: 53.8 x 53.8 x 90.5 mm (excluding baffle)

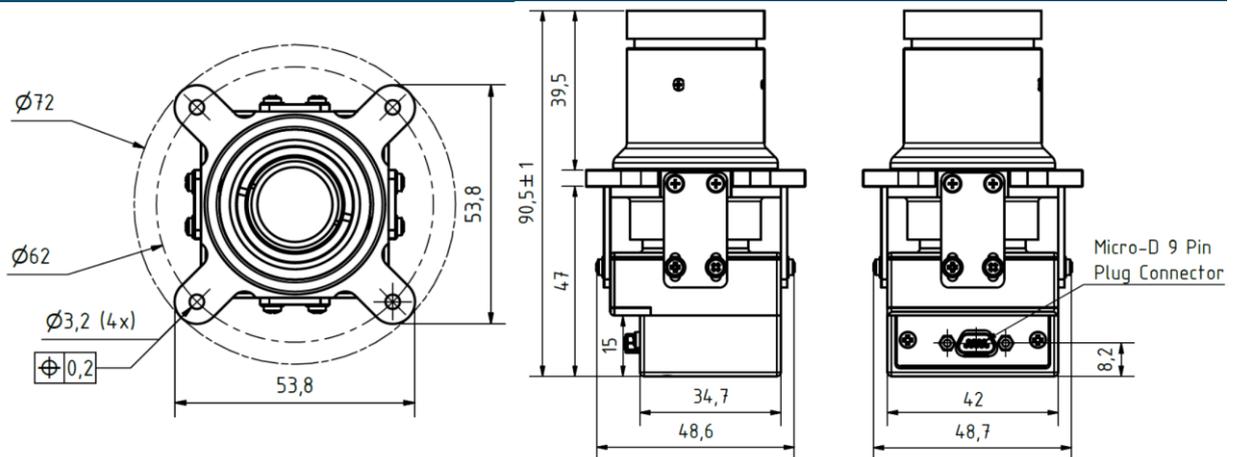
¹ Final radiation tolerance of the product can be tailored to mission requirements. Please contact Hyperion Technologies B.V. for more information.

SPECIFICATIONS

Performance				
Attitude determination accuracy (pitch, yaw)		10		arcseconds (3 σ)
Attitude determination accuracy (roll)		120		arcseconds (3 σ)
Update rate		5		Hz
Maximum slew rate (tip/tilt)		> 0.5		$^{\circ}/s$
Maximum slew rate (roll)		> 1		$^{\circ}/s$
Dimensions				
Outer dimensions		53.8 x 53.8 x 90.5		mm
Mass		280		g
Environmental				
Operating temperature		-20 - +40		$^{\circ}C$
Radiation tolerance		11		krad (Si)
Equivalent shielding thickness		> 3		mm Al
Electrical				
	Min.	Typ.	Max.	
Supply voltage	3.6	-	15.0	V
Power consumption	370	700 ¹	1000	mW

¹ At 5V, at 5Hz update rate

MECHANICAL CHARACTERISTICS



Standard version of the ST400 Outer dimensions [mm]
(note: the standard version does not include a baffle, as it is mission dependent)

For pricing, delivery, configuration and ordering information please contact Hyperion Technologies B.V. at info@hyperiontechnologies.nl, or visit Hyperion Technologies' website at www.hyperiontechnologies.nl.