



Attitude Determination

# ST200 STAR TRACKER

## HIGH PRECISION HIGH PERFORMANCE

The ST200 Star Tracker is one of the world's smallest and lightest fully autonomous, low power star trackers, aimed at applications in pico and nano-satellite platforms. It has been jointly developed by AAC ClydeSpace and Berlin Space Technologies. The ST200 is also suitable for applications on larger satellite platforms. For these applications, additional interfaces and power supply ranges are available. Optionally AAC Clyde Space offers standard size and mission-specific baffles.

### KEY HIGHLIGHTS

- 5 Hz update rate
- TTL UART interface  
RS422, RS485, I<sup>2</sup>C are optional
- Radiation tolerance qualified up to 9 krad (Si) for all components
- Low mass: 42 g
- Low power: 600 mW
- Outer dimensions (without baffle) 29 x 29 x 38.1 mm



#### ACCURACY

With an accuracy of 30 arcseconds (3-sigma) and its extremely small size the ST200 can be used in practically every platform that required attitude determination.



#### DESIGN

With its plug-and-play design and various baffle options available on demand the ST200 is the perfect star tracker to seamlessly integrate with AAC Hyperion's line of integrated attitude determination and control systems.



#### HERITAGE

The ST200 Star Trackers have been flying since 2015 on over 20 missions.

# TECHNICAL SPECIFICATIONS

Performance		
Attitude determination accuracy (pitch, yaw)	30	arcseconds (3-sigma)
Attitude determination accuracy (roll)	200	arcseconds (3-sigma)
Update rate	5	Hz
Maximum slew rate (tip/tilt)	< 0.3	°/s
Maximum slew rate (roll)	< 0.6	°/s

Dimensions		
Outer dimensions	29 x 29 x 38.1	mm
Mass (excluding baffle)	42	g
Optional baffle sun exclusion half angle <sup>4</sup>	30, 45	°

Environmental		
Operating temperature	-20 - +40.	°C
Radiation tolerance	9	krad (Si)
Equivalent shielding thickness	> 1.5	°

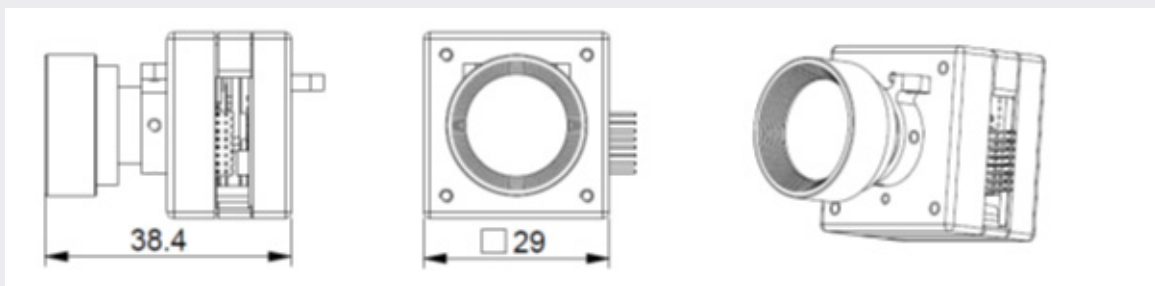
Electrical				
	Min.	Typ.	Max.	
Supply voltage	3.6	-	34.0	V
Bus logic level voltage	Referenced to VREF <sup>2</sup>			
Power consumption	370	700	1000	mW

<sup>1</sup> Maximum efficiency is reached when operating at the lowest voltage <sup>2</sup> VREF

can range from 1.8 to 5.1V for I<sup>2</sup>C and UART applications.

<sup>3</sup> At 3.65V, at 5Hz update rate

<sup>4</sup> Standard sizes. Custom baffles available on request.



To make an enquiry, request a quotation or learn about AAC Clyde Space's other products and services, please contact:

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