



## HIGH PRECISION HIGH PERFORMANCE

Our flight proven high-performance standalone gyroscope, PG400, was designed for precision satellite pointing, and can detect the slightest change in rate about an axis of rotation. It offers an Angular Random Walk of  $0.23 \text{ deg}/\sqrt{\text{Hz}}$  and a bias instability of  $1 \text{ deg/hr}$ . This plug-and-play satellite attitude determination solution has been engineered for maximum on orbit stability of your spacecraft, demanding low power in return. It utilises a RS422 interface with a request-based protocol for command and data handling, enabling seamless integration with your platform design, making it one of the most reliable and modular nanosatellite gyroscopes readily available on the market.

This compact, high-performance standalone gyroscope can be used for Attitude Determination in CubeSat and Small Sat across a range of applications from communications to earth observation. Not only is the PG400 gyroscopes design inherent of the design heritage of our reliable and flight proven iADCS solutions, but it is also compatible with iADCS 200 and 400 Attitude Determination & Control System. The versatile iADCS200 solutions were designed for the CubeSat form factor with modularity in mind to fit various mission requirements. The iADCS400 is a fully autonomous attitude determination and control system aimed at small satellites with a 6U CubeSat form factor or larger. The iADCS series is equipped with magnetorquers and can be further upgraded with the RW210 series reaction wheels, one or more ST200 star trackers, external sun sensors, magnetometers, or a precision IMU.



### COMPACT SIZE

The PG400 is an impressive  $30.8 \times 25.7 \times 17 \text{ mm}$  in size, its design is optimised for enhanced performance through its compact footprint.



### COMMUNICATION

The PG400 makes use of a full duplex RS422 interface, speaking the unified AAC Hyperion Protocol also utilised on many of AAC Hyperion's range of Attitude Determination and Control Products, simplifying the development of interface drivers.



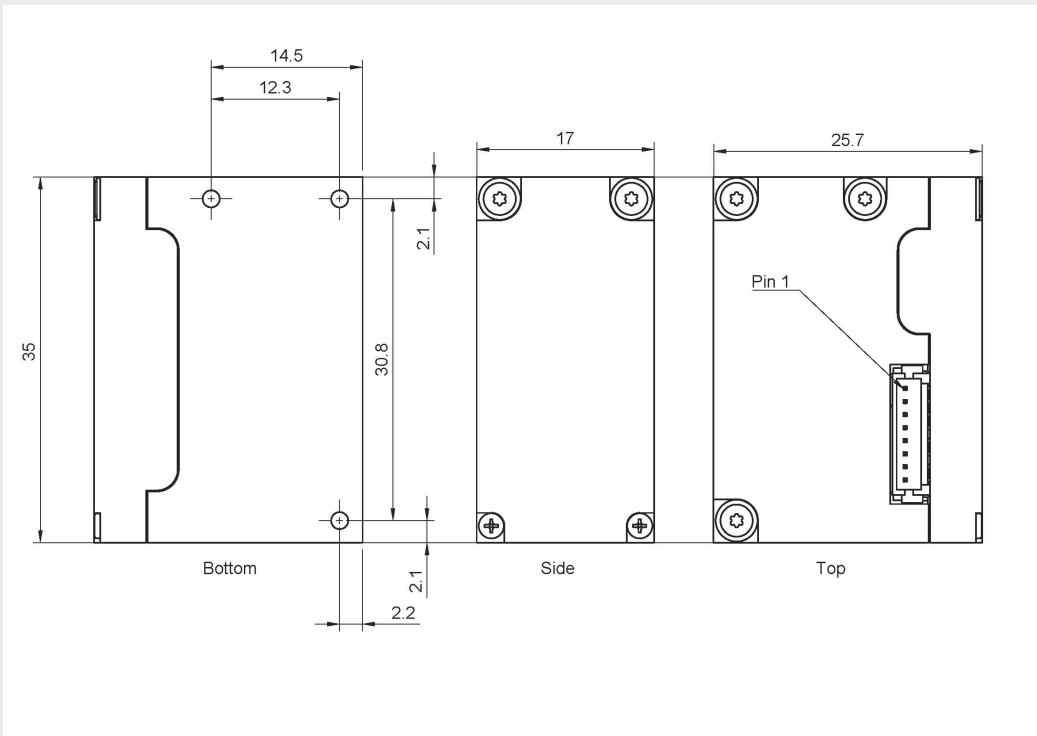
### HERITAGE

The PG400 gyroscope has successfully-flown on orbit and it based on the design heritage of the internal IMU used in our reliable and flight proven attitude determination and control system iADCS solutions.

# TECHNICAL SPECIFICATIONS

Performance specifications	Min.	Typ.	Max.
Gyroscope Range (°/s)	-125	°	125
Zero rate offset (°/s)	-1		1
Offset temperature drift (°/s/°C)		0.002	0.01
Offset short term bias stability (°/h)		1	
Angular random walk (°/√h)		0.23	0.3

Variable	Min.	Typ.	Max.
Supply Voltage (V)	3.65	5.0	5.5
Supply Current (mA)		75	100
RS422 input signal levels (V)	+/- 0.2		+/- 5
RS422 Output signal levels (V)		+/- 3	
Operational temperature range (°C)	-40	20	85



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