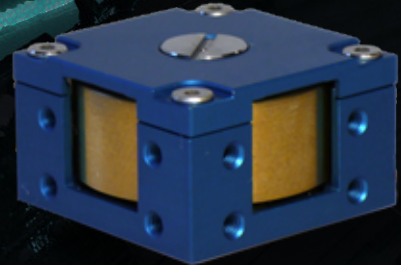


## HIGH PRECISION HIGH PERFORMANCE



The RW210 series reaction wheels are low mass, low power reaction control wheels, which allow CubeSats and other pico- or nano-satellites to control their attitude. The RW210 series of reaction wheels feature an internal fire-and-forget controller, which frees up the host processor's workload. The standard configuration features up to 0.1 mN.m torque, and an I<sup>2</sup>C interface. Different interfaces are available on request. The RW210 is available with either 1.5, 3.0 or 6.0 mN.m.s of momentum storage in both directions of rotation.

### KEY HIGHLIGHTS:

- Total Momentum Storage:  
+/- 1.5, +/- 3.0 or +/- 6.0 mN.m.s
- Maximum torque: 0.1 mN.m
- Fire-and-forget speed and torque control
- I<sup>2</sup>C-compatible interface
- Plug-and-play design
- Primary components radiation tolerant to over 36 krad (Si)
- Low Mass: 21 / 32 / 48 g
- Low Power: < 800 mW peak
- Compact: 25 x 25 x 15mm



### MINIATURISED

Within this range of angular momentum storage (1.5 to 6 mNms), the RW210 series reaction wheels have one of the lowest mass and dimensions in the market.



### INTEGRATION

Specifically designed for 1 to 3U CubeSat platforms, these low mass reaction wheels are also used in the iADCS series of attitude determination and control systems as well as the iACS series of attitude control systems.



### DESIGN

The RW210 reaction wheels have been subject to continued improvement ever since their first flight in 2017. This agile design approach ensures that changing user needs with regards to micro-vibrations, bearings, or shock absorption.

# TECHNICAL SPECIFICATIONS

Performance		
Total momentum storage	+/- 1.5, +/- 3.0, +/- 6.0	mN.m.s
Maximum torque	+/- 0.1	mN.m
Maximum rotation rate	10000 / 15000 / 15000	rpm
Control accuracy	+/- 0.5	rpm

Dimensions		
Outer dimensions	25 x 25 x15	mm
Mass	21 / 32 / 48	g

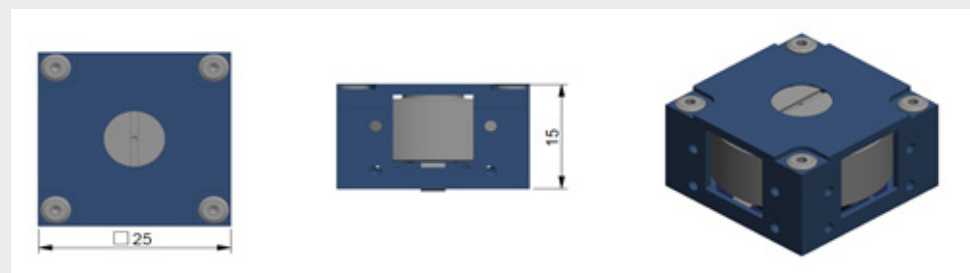
Enviromental		
Operating temperature	-20 - +60	°C
Radiation tolerance	> 36	krad (Si)

Electrical specifications				
	Min.	Typ.	Max.	
Supply voltage	3.25	3.3	3.5	V
Bus logic level voltage	3.3-5.1.			V

Power consumption <sup>1</sup>				
	Min.	Typ.	Max.	
Idle	10	65	75	mW
Nominal <sup>2</sup>	-	400	630	mW
Peak	-	-	800	mW

1 Reference values for RW210.15 model

2 Rotating at a constant 10000 RPM



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

**[enquiries@aac-clydespace.com](mailto:enquiries@aac-clydespace.com)**



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