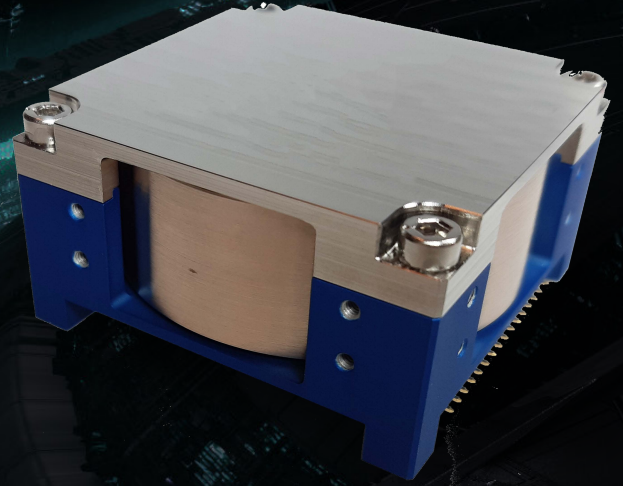


HIGH PRECISION HIGH PERFORMANCE



The RW400 series reaction wheel is a low mass, low power reaction control wheel, which allows CubeSats and other small platforms to control their attitude. The wheel was specifically designed for 6 - 12U CubeSat platforms, and is also used in the iADCS400-series of attitude determination and control systems. It features an internal fire-and-forget controller, which frees up the host processor's workload. The RW400 is available with either 15, 30 or 50 mN.m.s of angular momentum storage in both directions of rotation.

KEY HIGHLIGHTS:

- Total momentum storage: +/-15 mN.m.s, +/-30 mN.m.s, +/-50 mN.m.s
- Maximum torque: > 12 mN.m (braking)
- Primary components radiation tolerant at least up to 36 krad
- Low mass: 197 / 210 / 375 g
- Low power: < 1900 mW @ 55 mN.m.s
- Compact: 50 x 50 x 27 mm



DESIGN

The RW400 reaction wheel series has been designed with the user in mind. Thanks to its plug-and-play set-up, it is easy to use and integrate.



PERFORMANCE

All versions feature in excess of 8 mN.m of torque and both I²C compliant interface as well as a bidirectional RS422 interface. Different interfaces are available on request.



HERITAGE

The RW400 series is based on AAC Hyperion's experience in the design, development and flight qualification of small reaction wheels.

TECHNICAL SPECIFICATIONS

Performance		
Total momentum storage	+/- 15, +/- 30, +/- 50	mN.m.s
Maximum torque	+/- 8	mN.m
Maximum rotation speed	5000	rpm
Control accuracy	+/- 1	% of target rpm

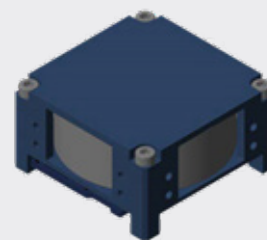
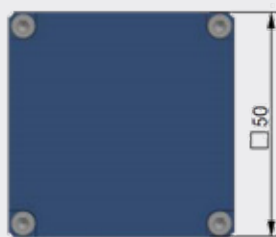
Dimensions		
Outer dimensions	50 x 50 x 27	mm
Mass	197 / 210 / 375	g

Environmental		
Operating temperature	- 40 to + 60	°C
Radiation tolerance	>36	krad (Si)

Electrical specifications				
	Min.	Typ.	Max.	
Supply voltage	4.5	5.0	5.25	V
Logic supply voltage	2.3	3.3	5.1	V
Bus logic level voltage	3.3 - 5.1			V

Power consumption				
	Min.	Typ.	Max.	
Idle	-	-	75 ¹	mW
Nominal	-	1000 ¹	-	mW
Peak	-	1900 ¹	15000 ¹	mW

¹ Can be tailored



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

enquiries@aac-clydespace.com



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