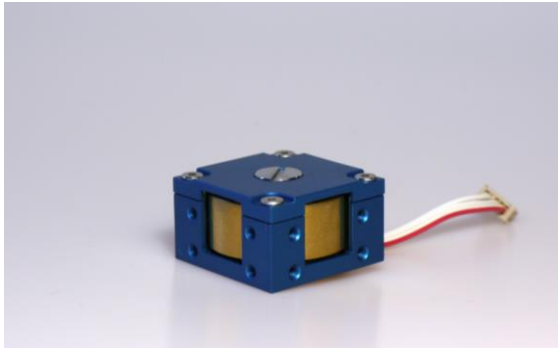




# HYPERION TECHNOLOGIES

## RW210 Series Reaction Wheel



### DESCRIPTION

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. These reaction wheels are specifically designed for 1 to 3U CubeSat platforms, and they are also used in the iADCS-series of attitude determination and control systems as well as the iACS series of attitude control systems.

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.

### 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)
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- Low mass: 21 / 32 / 48 g
  - Low power: < 800 mW peak
  - Compact: 25 x 25 x 15 mm



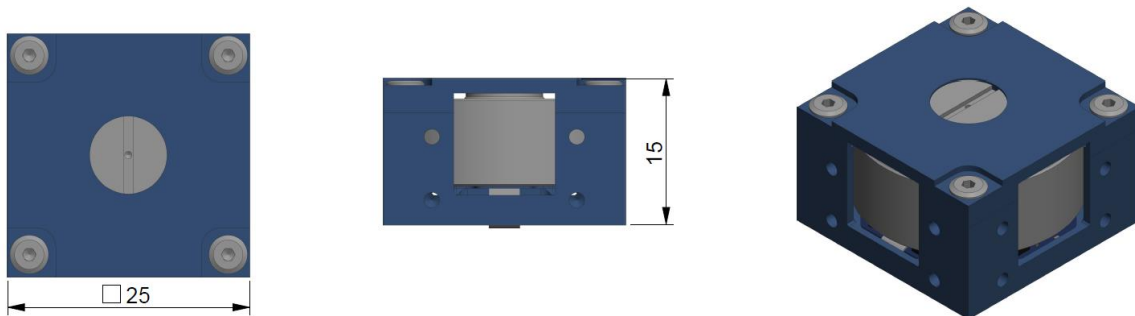
## SPECIFICATIONS

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 x 15			mm
Mass	21 / 32 / 48			g
Environmental				
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

<sup>1</sup> Reference values for RW210.15 model

<sup>2</sup> Rotating at a constant 10000 RPM

## MECHANICAL CHARACTERISTICS



RW210 outer dimensions [mm]

For pricing, delivery, configuration and ordering information please contact Hyperion Technologies B.V. at [info@hyperiontechnologies.nl](mailto:info@hyperiontechnologies.nl), or visit Hyperion Technologies' website at [www.hyperiontechnologies.nl](http://www.hyperiontechnologies.nl).