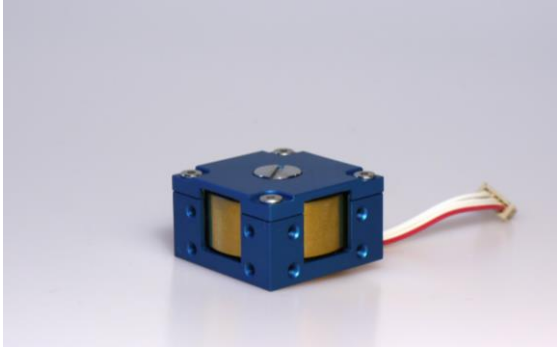




# HYPERION TECHNOLOGIES

## 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 ready design
- Primary components radiation tolerant to over 45 krad (Si)

- Low mass: 26 / 32 / 48 g
- Low power: < 1000 mW peak
- Small dimensions: 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	-40 - +60			°C
Electrical specifications				
	Min.	Typ.	Max.	
Supply voltage	3.1	3.3	3.5	V
Bus logic level voltage	3.2-5.1			V
Power consumption <sup>4</sup>				
	Min.	Typ.	Max.	
Idle	10	65	75	mW
Nominal <sup>2</sup>	-	230	600	mW
Peak	-	-	850 <sup>3</sup>	mW

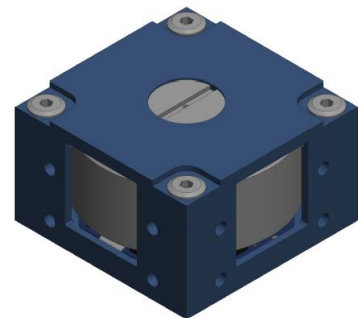
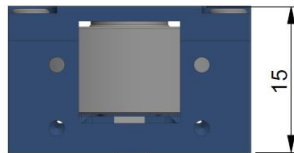
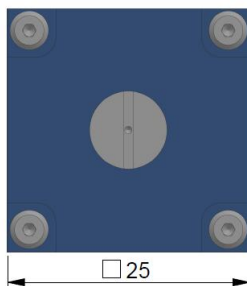
<sup>1</sup> To be confirmed

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

<sup>3</sup> When braking

<sup>4</sup> Reference values for RW210.15 model

**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).