

# RW40

## Reaction Wheels 40 for Nanosatellites



The latest Reaction Wheel generation, plug-&-play, radiation proof, with a long life time, safeguarded electronics, and a very compact design.



### Main benefits

- ✓ Plug & play concept
- ✓ Embedded electronic
- ✓ Robust technology (stainless steel bearings)
- ✓ High torque design (brushless motor)
- ✓ High performance control loop



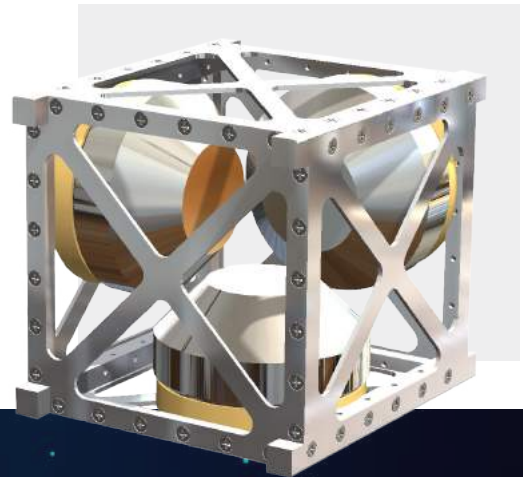
Detumbling



Attitude control



Torque or angular rate control



### Key features

Torque  
4 mNm mean

Kinetic moment  
40 mN.ms | 60 mN.ms peak

Accuracy  
Down to 1 rpm

Supply Voltage  
14 V [12 V; 16 V]

Data Interface  
RS 485

Mechanical interface  
Size: 1 RW = Ø 65 x 40.5 mm, ie  
3 RW  $\subset$  1 U (10 x 10 x 10 cm<sup>3</sup>)  
Mass: 1 RW = 260 g (electronic  
and radiation protection  
included)

Life time  
More than 32,000 zero  
crossing tests  
3 years of operation

Thermal environment  
-25 °C / +45 °C

Mechanical environment  
QSL: 25 g  
Random: 20 grms  
Shock: 1,000 g/1,000 Hz

Radiation  
<10 Krad

Protocol  
NSP communication Protocol

Acceptance Test  
 $\mu$ vib | Vibration | Thermal  
cycling | Performance



# REACTION WHEELS 40

Satellite control

