

Higher Momentum Micro Wheel

Features



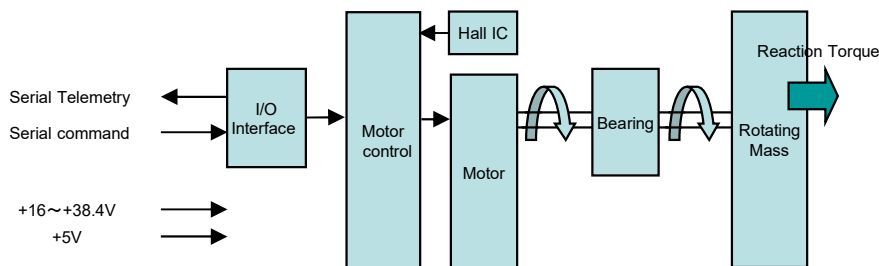
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- Compact size, with maximum angular momentum comparing to conventional micro wheel. Angular momentum and mass are selectable upon user's requirements.
- Three control modes and two filter modes can be selectable.
- Simple interface and easy operation can be available with built-in MPU
- Micro vibration for high attitude stability missions. Waterfall plot data is accessible for satellite system engineering.

Heritage

QPS-SAR 1, 2 (Izanagi, Izanami) etc.

Block Diagram



Performance

Item	Capability	Remarks
Maximum momentum	0.4Nms @6000rpm 0.6Nms @9000rpm (option)	
Maximum output Torque	> 0.012Nm @ 6000rpm	
Speed range	±6000rpm	
Power consumption Steady state @ 6000rpm	4.3 W TYP	
Disturbance @ 6000rpm	Torque < 0.1Nm Force < 0.3N	100 to 200Hz
Imbalance	Static: < 0.08g·cm , Dynamic: < 2.5g·cm ²	
Power Bus Voltage Motor Exc. Control circuit	+16 ~ +38.4 VDC +5V	
Dimension	72W X 72D X 70Hmm TYP	
Mass	1.05kg TYP (@ 0.4Nms)	
Control mode	Motor torque / Speed / Output torque	
Speed filtering	Kalman filter / FIR filter	
Signal Interface	RS422 asynchronous serial I/O	
Operation Temperature Range	-15 ~ +60°C	
Random Vibration	> 225.7m/s ² rms	
Radiation Hard	> 10krad (Si)	
Bearing Life	> 3.2X10 ⁹ Revolution	

Subject to change without prior notice.