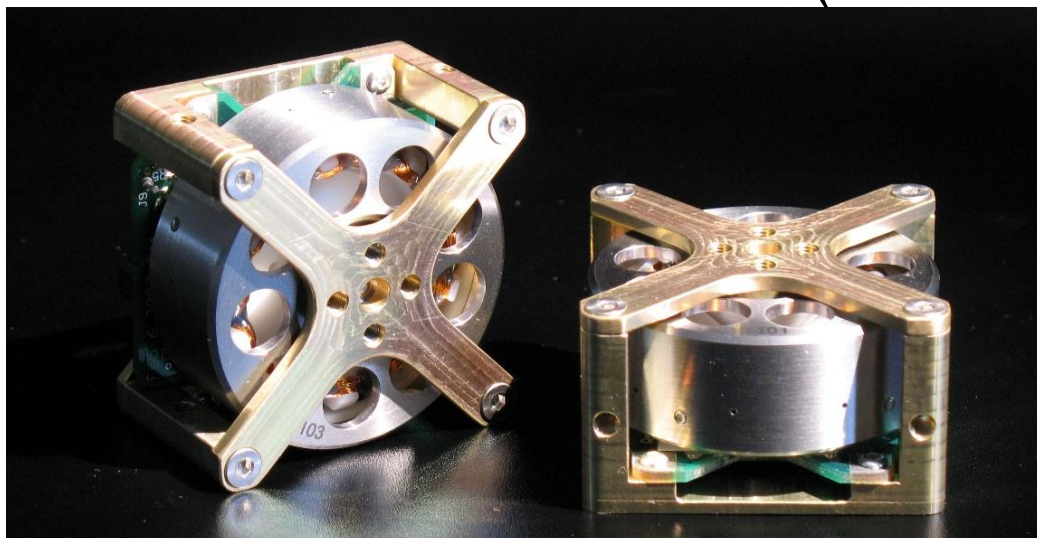


# Picosatellite Reaction Wheels (RW-0.01)



<b>Momentum</b>	Nominal: 0.01 Nms Peak: 0.018 Nms (at 5 V supply)
<b>Torque</b>	$\pm 1$ mNm at 0.01 Nms (at 5 V supply)
<b>Control Mode</b>	Speed or torque with built-in control CPU
<b>Command / Telemetry</b>	UART or I <sup>2</sup> C/SMBus
<b>Mechanical</b>	Dimensions: 50 mm x 50 mm x 30 mm Mass: 120 g
<b>Supply Voltage</b>	Nominal: 3.4 V to 6.0 V Maximum: 8 V
<b>Supply Power (in vacuum)</b>	1.05 W @ 0.01 Nms, + 1 mNm 0.25 W @ 0.018 Nms, steady state 0.11 W @ 0.005 Nms, steady state
<b>Environment</b>	Thermal: $-40^{\circ}\text{C}$ to $+70^{\circ}\text{C}$ (operating) Vibration: $>12$ g <sub>RMS</sub> Radiation: $>20$ krad dose
<b>Reliability</b>	Diamond coated hybrid ball bearings Redundant motor windings Radiation lot-screened parts (optional)
<b>Heritage</b>	10 Units total on-orbit on 4 satellites, first launched June 2014 Common design to RW-0.03, with $>8$ year on-orbit
<b>Price</b>	US\$20,000 each, +US\$2000 for radiation lot-screened parts

