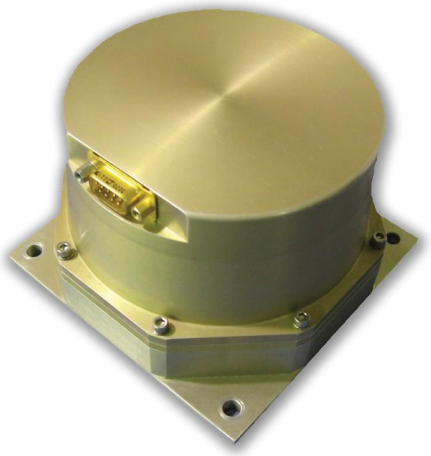
MSCI MW1000-X Reaction Wheel

The MW1000-X is a digitally-controlled reaction wheel offering closed-loop torque and momentum management. The MW1000-X is MSCI's most popular wheel model for microsatellites, upgraded with second-generation electronics.

Key Features:

- 1.1 Nms of momentum storage/exchange and 30 mNm of torque
- Part of MSCI's MicroWheel series of reaction wheels, known for their low vibrations and extensive flight heritage on governmental, commercial, and scientific missions since 2002
- Can be equipped with an integrated, high-accuracy solid-state rate sensor
- Fully-sealed and self-contained, simplifying spacecraft design and AIT



Specifications:

Angular Momentum Storage Capacity	1.1 Nms
Torque	30 mNm
Mass	< 1.44 kg (+0.06 kg w/ rate sensor)
Size	129 mm × 129 mm × 89 mm
Power Consumption *28 V, +25 °C*	Idle: < 1.5 W (+1 W w/ rate sensor) Steady-state: < 9 W Peak: < 50 W
Power Supply	28 V ± 6 V sourcing and sinking
Imbalance	Static: < 0.5 mg·m Dynamic: < 0.05 mg·m^2
Temperature Range	Operating: -24 °C to +61 °C Survival: -29 °C to +66 °C
Design Life	> 7.5 years
Radiation Characteristics	> 25 krad-Si TID at board level, plus > 1 mm shielding
Data Interface	Asynchronous RS-422/485
Status	Extensive flight history

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