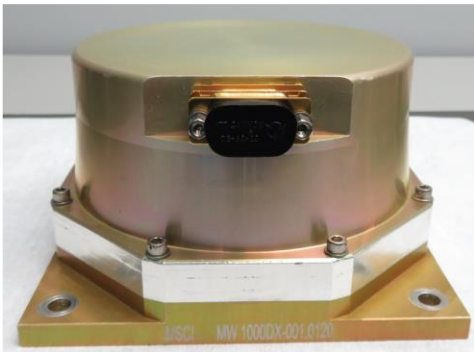


# MSCI MW1000-DX Reaction Wheel

The MW1000-DX is a digitally-controlled reaction wheel offering closed-loop torque and momentum management. It is optimized for microsatellites and small spacecraft with high torque requirements and reduced actuator mass allotments.

## Key Features:

- 1 Nms of momentum storage/exchange and 125 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
- Targeted thermal monitoring and management, maximizing mission operations
- Fully-sealed and self-contained, simplifying spacecraft design and AIT



## Specifications:

Angular Momentum Storage Capacity	1.0 Nms
Torque	125 mNm
Mass	< 1.47 kg
Size	129 mm × 129 mm × 75 mm
Power Consumption 28 V, +25 °C	Idle: < 1.5 W Steady-state: < 9 W Peak: < 230 W
Power Supply	28 V ± 6 V sourcing and sinking
Imbalance	Static: < 0.5 mg·m Dynamic: < 0.05 mg·m <sup>2</sup>
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	Constellation deliveries



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