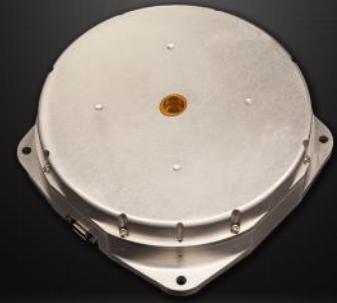


REACTION WHEEL

RW4-1.0 Data Sheet

Version 3.1 – 2025-01-31



MOMENTUM	Nominal: ± 1.0 Nms
TORQUE	± 100 mNm (see below torque-box)
CONTROL MODE	Speed or Torque
COMMAND/TELEMETRY	Redundant RS-485
MECHANICAL	Dimensions: 148 mm x 146 mm x 45 mm Mass: 1.4 kg max
IMBALANCE	Static: < 4 g-mm (average 2 g-mm) Dynamic: < 80 g-mm ² (average 25 g-mm ²)
SUPPLY VOLTAGE	24 V to 34 V (nominal 28 V)
POWER (28 V in VACCUM)	Steady state max: 5 W Peak power at max torque: 99 W See below power curve for various torque commands and speeds
ENVIRONMENT	Thermal: -30° C to $+85^{\circ}$ C (operating) Random Vibration: 20.0 gRMS
RADIATION	TID: 50 krad (board level) Heavy Ion: Up to 50 MeV-cm ² /mg on most active parts
FLIGHT HERITAGE	Total of 136 units on orbit across 2 generations, with cumulated 590 years since first launch in 2016

