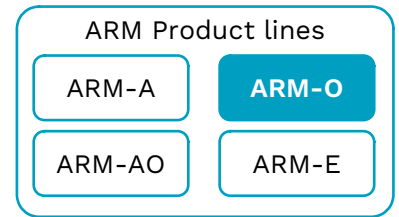


DATASHEET | ARM-O

Aurora Resistojet Module – Orbit control



ARM PRODUCT FAMILY

The ARM products provide an array of 1-12 individual water resistojet thrusters with a shared tank for a variety of use cases. The products are intended for any nano- and microsatellite sizes, with specific CubeSat form factor variants being developed for off-the-shelf delivery.

ARM-O

The Aurora Resistojet Module for Orbit control is a CubeSat propulsion system utilizing a water-based propellant. It's the simplest variant of the family: it generates thrust to one direction. The use cases include orbital changes, collision avoidance and station keeping. Includes 1-4 thrusters depending on size and thrust requirements.

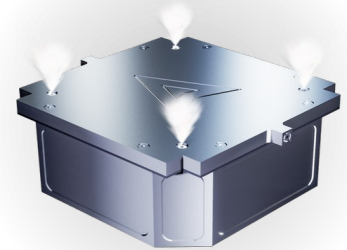


Illustration of an ARM-O-A1

ARM-O SPECIFICATION

Values are preliminary; some design delta required for each option.

Tank variant	AS	A0, A1	A2	B1 - B4
Form	3*3*5 cm ³	0.3 – 0.5 U	1 U	0.5 – 2 U
Target sat	Any nano-/pico-	1-3 U	1-3 U	6 U
Idle power	50 mW			
Active power	3 – 5 W/mN			
Thrust	0.6 – 4 mN			
Isp	100 s (estimate)			
Command	CAN, I2C or RS485			
Thrusters	1	2 or 4	2 or 4	2 or 4
Impulse	1 – 3 Ns	50 – 100 Ns	300 – 500 Ns	300 – 1000 Ns
Wet mass	< 50 g	300 – 500 g	1000 g	2000 g
Dry mass	< 50 g	< 400 g	< 700 g	< 1500 g
Availability	6-12 months from order			

EXAMPLE USE CASE

Scenario	Specs	Solution
3U CubeSat deployed from ISS, and needs an extended lifetime	<ul style="list-style-type: none"> • 4 kg satellite • 409 km initial orbit • 0.5 U ARM-O-A1 	The resistojet system is used to boost the orbit into a 450 km circular orbit, approximately doubling the lifetime