DATASHEET | ARM-C

Aurora Resistojet Module – Collision avoidance

| ARM Product line		
ARM-A	ARM-O	ARM-C
ARM-AO	ARM-E	MEPE
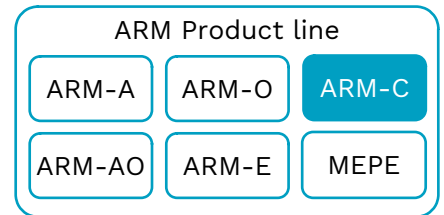
ARM PRODUCT LINE

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 satellites between the masses of 1 - 250 kg, with some variants being developed for off-the-shelf delivery.

ARM-C

The Aurora Resistojet Module for Collision avoidance is a microscale propulsion system utilizing a water-based propellant for ensuring the safety of your CubeSats and Small-Sats. It's the simplest variant of the product family: it generates 1 mN of thrust on command with a single resistojet thruster. The device is built for serial production, making the system affordable and available on demand. It can be used in an array of 2-10 thrusters for larger satellites with a mass of > 25 kg.
The ARM-C is available off-the-shelf starting January 2024.

ARM-C SPECIFICATION

Quantity	Value
Form	~ 25 * 30 * 50 mm³
Target satellite	Single unit for up to ~25 kg satellite. 2-10 units for up to ~250 kg satellite.
Power	5 W avg during burn, 12 W peak
Thrust	1 mN
Control	Two control pins, one with PWM input
Total impulse	Enough for 3-20 avoidance maneuvers.
Mass	~ 100 g
Propellant mass	~ 3 g
Lead time	1-2 months from order
Availability	First delivery January 2024
Customizability	A custom mounting plate can be produced.
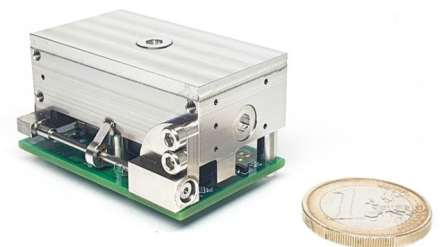
ARM-C

Values are preliminary, exact figures provided in technical documentation.

EXAMPLE USE CASE

Scenario	Action
3U satellite with ARM-C gets a collision warning notification with risk > 1 / 1000	After 30 s preheat, a 4 minute burn generates 0.06 m/s dv. This drops the collision risk to below 1 / 10 000