

HIGH PRECISION HIGH PERFORMANCE



The PM200 is a bi-propellant propulsion module offered in partnership with Dawn Aerospace. It is intended for use in 3-6U CubeSats and allows manoeuvres of up to 230 m/s to be performed utilizing non-toxic propellants (nitrous oxide and propene) in a self-pressurizing configuration. Low system complexity and zero propellant toxicity allow for simple and robust operations, both on the ground and when in orbit. The medium tank pressure and high storage density of liquid propellants enables high safety factor tanks to be used with little mass penalty. The standard 1U configuration of the PM200 propulsion module can deliver in excess of 230 m/s of velocity increment to a 3U CubeSat of 4 kg. The system utilizes a single 0.5 N thruster. This relatively high thrust allows manoeuvres to be completed in a timely manner as well as enabling the use of Hohmann transfer orbits. Integrated thrust vector control ensure that inherent thruster disturbance torques are actively compensated.

KEY HIGHLIGHTS:

•	Nominal thrust	0.5 N
•	Specific impulse	> 285 s
•	ΔV (3U CubeSat)	> 230 m/s
•	Minimum impulse bit	35 mN.s
•	Maximum impulse bit	5 N.s
•	Repeatability (3-sigma)	+/- 5 mN.s
•	Power requirement (firing)	< 12 W
•	Power requirement (sleep)	< 0.1 W
•	Storability	> 5 years



COMPATIBLE

The PM200 can be configured to suit any CubeSat structure. It also features an I²C or RS422/RS485 compliant interface.



PERFORMANCE

The PM200 can be seamlessly integrated with AAC Clyde Space's line of integrated attitude determination and control systems to provide a fully integrated GNC and ADCS solution. The PM200 can fire seconds after wake-up allowing for agile missions that do not have time to lose.



CUSTOMIZABLE

Through the use of additive manufacturing, the system is highly customizable. Design parameters such as total system deltaV, interface style and thrust direction can be changed on request and adapted to an existing CubeSat architecture.

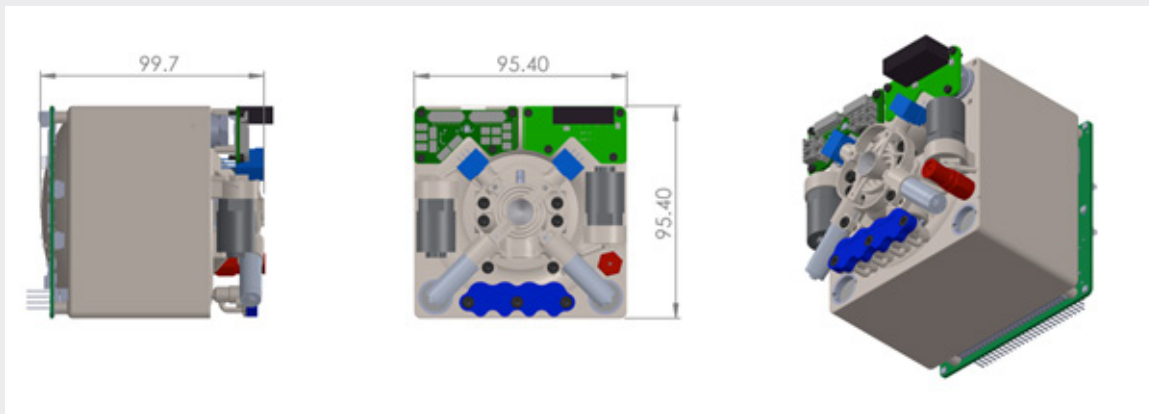
TECHNICAL SPECIFICATIONS

Performance		
Total impulse	>850	N.s
Thrust	0.5	N
Isp vac	>285	s
ΔV (4kg satellite incl. PM200)	>230	m/s

Enviroental		
Operating temperature	-5 to +35	°C

Electrical specifications		
Supply voltages	5 and 12	V
Power required (during firing)	<12	W
Power required (sleep)	<0.1	W

Mechanical		
Outer dimensions	97.7 x 95.4 x 95.4	mm
Nom. propellant storage pressures	45 (Ox) / 9 (Fuel)	bar
Dry mass (excluding propellant)	1100	g
Propellant mass	310	g



To make an enquiry, request a quotation or learn about AAC Clyde Space's other products and services, please contact:

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