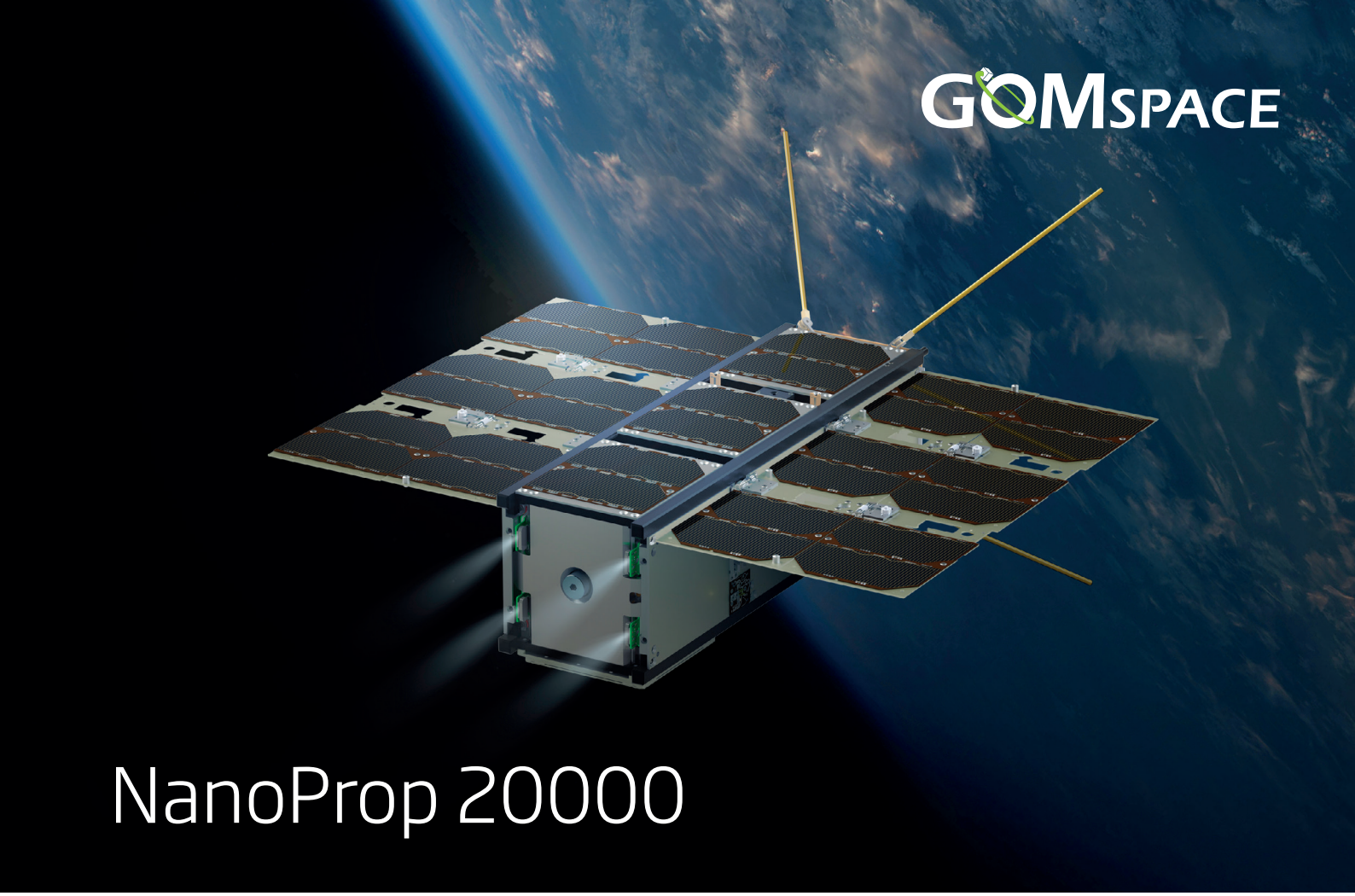


NanoProp 20000

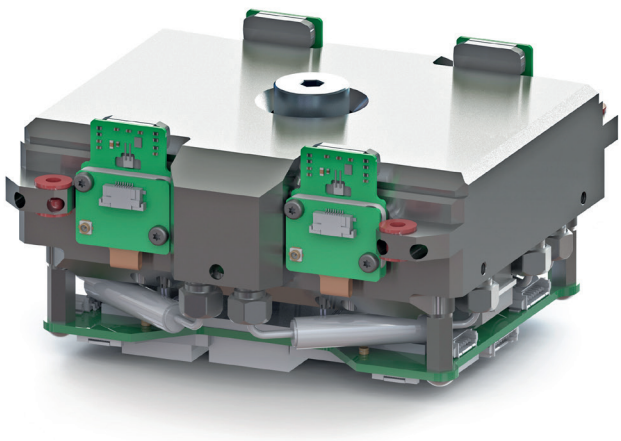
NanoProp 20000 is the latest propulsion system in the GomSpace product family with **flight heritage since 2015.** NanoProp 20000 has improved performance and is built on **ESA qualified components**.

NanoProp 20000 is a compact propulsion system, size is only **0.5U**, that provides propulsion capability even to small CubeSats. Compared to previous versions, NanoProp 20000 has an increased propellant capacity. The design allows a **flexible tank size** in order to meet different needs in terms of delta-V.

NanoProp 20000 is redundant. It has two branches, each with a plenum tank, isolation valves, and two diagonally placed thrusters. NanoProp 20000 has 4 thrusters with the **choice of 1 mN or 10 mN** as the nominal thrust level. All four thrusters are individually controllable via the built-in control electronics board.

Benefits achieved by the NanoProp 20000

- Compact design comprising of integrated propellant channels and less screwed connections optimised for reduced leakage.
- High quality solenoid valves with a broad operational temperature range and long life-time.
- GomSpace offers product modification and scalability (i.e. increased propellant capacity), to meet the specific needs of our customers next project.
- Simplified launch campaign: NanoProp 20000 can be shipped to launch site with filled tank.



Technical Information

NANOPROP 20000 - KEY FEATURES:	
System Schematic	• Four MEMS thrusters • One propellant tank with two integrated plenum chambers and an integrated fill and drain port • Two plenum isolation valves • Four thruster isolation valves • Six filters • One interface and control electronic board
Functionality	• Nominal thrust level: 1 mN or 10 mN • Minimum impulse bit: 25 µNs • Total Impulse: 32-40 Ns • Isp: 50 s • Propellant: Butane • Propellant capacity: 65 g (or 130 ml) • Temperature range: – Operating: 0 °C to 50 °C – Non-operating: -7 °C to 50 °C • MEOP: 5 bar (Reached at 50 °C)
Interface	• CAN and I2C interface • 5VDC and 12VDC electrical interface
Software command	• Thruster control • Valve/heater control • Tank temperature/pressure control
Mass and demensions	• L x W x H: 95mm x 95mm x 52mm • Dry mass: 380g

NanoProp 20000 Schematics