

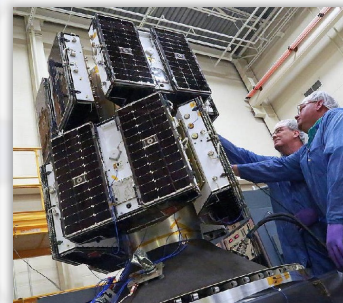
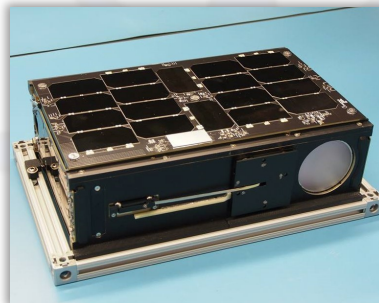
Small Satellite Capabilities



Parabilis Space Technologies Inc., located in San Marcos, CA, is an SBA-registered, HUBZone-certified business. Parabilis was formed by a core group of experienced and passionate engineers with the mission of providing affordable aerospace solutions to catalyze the emerging New Space industry.

Parabilis is a low-cost provider of satellite bus structures, propulsion systems, and support services tailored to the unique needs and tight budgetary requirements of the cube-, micro-, and smallsat markets.

SmallSat Experience: Design, Test, Manufacturing, Integration, Ops

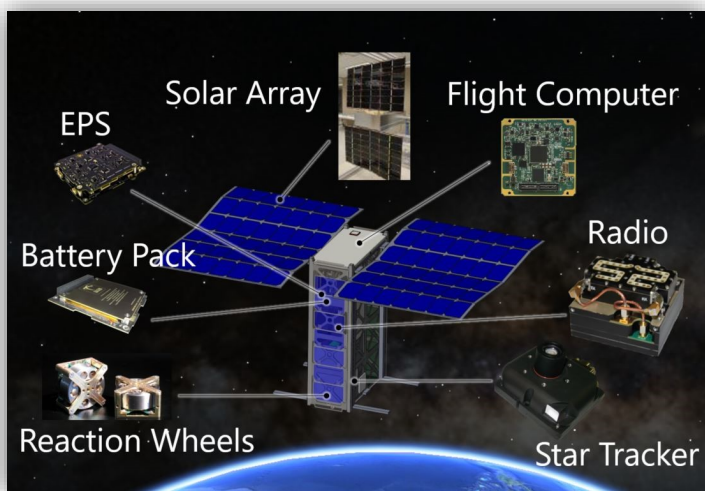


6U Perseus M (left); CYGNSS bus (right)

Parabilis engineers have extensive experience designing, testing, assembling, and integrating small-sat buses and structures, and can design a custom bus for any payload. Parabilis personnel provided the technical leadership to integrate two 6U Perseus-M satellite buses, and provided power systems engineering and flight support for the recently-launched CYGNSS constellation of eight small satellites. CYGNSS is examining ocean surface properties, atmospheric thermodynamics, radiation, and convective dynamics to better predict hurricane formation and intensification. The Parabilis team is also currently working with AstroDigital to perform systems engineering, AIT, digital image processing, and satellite engineering/operations for the Landmapper small sat constellation.

SmallSat Analysis/Support

- * Concept of Operations (CONOPS)
- * Mission simulations
- * Trajectory analyses and optimization
- * Clean room bus assembly; test facility setup
- * Environmental and acceptance testing
- * Post-shipment inspection and testing
- * Post-launch bus commissioning
- * Procedure development/documentation
- * Flight ops support; spacecraft monitoring



6U CubeSat Bus Component Integration

SmallSat Propulsion: Development and Integration

- * **Hybrid** rocket motor, green propulsion, high thrust for responsive maneuvering
- * **Cold Gas** thrusters, simple low-cost attitude control & maneuvering
- * **Liquid bi-propellant** thrusters including nitrous/ethanol, nitrous/methane, and Lox/methane
- * **Liquid mono-propellant** thrusters including hydrogen peroxide and hydrazine
- * **Electric** hall effect thrusters, low-thrust high efficiency station keeping over long mission durations