

BCP-Small Spacecraft



Ball Configurable Platform (BCP) Small

The BCP-Small spacecraft uses a versatile single-string architecture and modular flight software that have been proven, evolved, and refined over Ball Aerospace's decades of spaceflight heritage. The BCP architecture enables Ball to deliver a state-of-the-art smallsat product that is both affordable and configurable to a wide range of challenging mission requirements.

BCP-Small has been chosen by customers across civil and national missions to ensure on schedule delivery and on-orbit success every time.

STPSat-3

Design-reuse enabled rapid spacecraft development with integration and test (I&T) completed in just 47 days.

GPIM

Flexible payload accommodation and test capabilities enabled the first on-orbit demonstration of a novel green propellant system.

SPHEREx

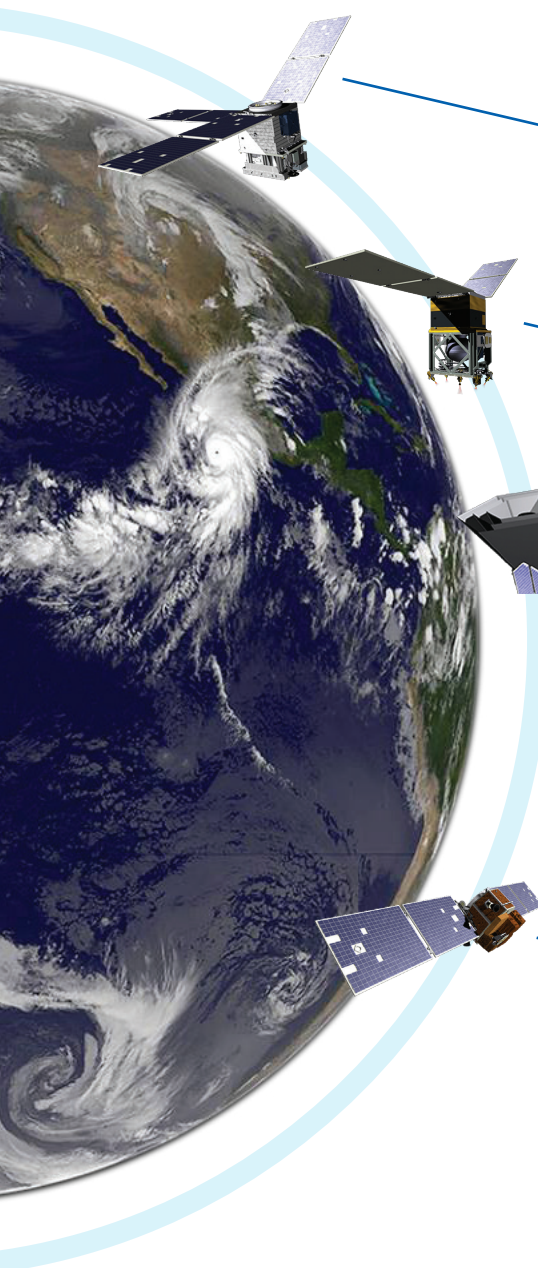
Modular hardware packages used to achieve high mission data downlink rates, large data storage, and high-accuracy pointing.

SWFO-L1

Systems engineering and modeling tools used to achieve exceptional magnetic cleanliness for deep space payload.

Multiple National Programs

End-to-end secure facilities, including flight operations, ensure mission success for specialized payloads.



GO BEYOND WITH BALL.®

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The BCP-Small spacecraft can accommodate needs ranging from hosting sophisticated science instruments to rapid technology demonstration missions. With a design life up to five years and specialized payload accommodations available, the BCP-Small can be configured to your unique needs and within your desired budget.

- **Various hardware packages available using common interfaces**
- **Flexibility to increase system-level capabilities (example: exquisite pointing, thermal isolation, or EMI mitigation)**
- **Integration of the best components through strong, long-lasting supplier relationships**

The BCP-Small benefits from Ball Aerospace's renowned position as an end-to-end producer of critical space systems. World-class facilities, mission assurance expertise, and streamlined processes for simulation, integration, and test combine to enable a proven and affordable solution for your next smallsat mission.

STP-SIV



Green Propellant Infusion Mission (GPIM)

Payload Accommodation Capability

PARAMETER	BCP SMALL
Payload Mass	ESPA: up to 100 kg ESPA-G: up to 270 kg Dedicated: Tailored to mission parameters
Payload Orbit Average Power (OAP)	Up to 1 kW (28 VDC, orbit and pointing mode dependent)
Payload Volume	Variable, depending on launch option (ESPA-G: 36 × 33.5 × 20 in)
Payload Digital Command/Data Interface	RS-422, Spacewire, Ethernet, Other options available
Other Payload Services Offered	Temperature Control, Thermal & Jitter Isolation, EMI Mitigation Design, Magnetics, Payload data processing, Support for Cryogenic Payloads

Spacecraft Capability

PARAMETER	BCP SMALL
Orbit	400 to 1200 km (all inclinations), options for MEO, GEO, and Deep Space
Launch Vehicle Compatibility	Electron, Minotaur I, Minotaur IV, Falcon 9, Atlas V, Vulcan Centaur, Falcon Heavy, New Glenn, or others
Space Vehicle Design Life	5 years
Attitude Knowledge	≤20 arcsec (3σ) per axis
Attitude Control	≤25 arcsec (3σ) per axis
Mission Data Downlink Rate	Up to 600 Mbps
On-Board Data Storage	128 GB
Propulsion (Option)	Hydrazine, electric propulsion, or green options



Ball Aerospace

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