

Stop Wasting Years on Payload Integrations



End-To-End Cloud Platform for Spacecraft and Payloads

SpaceBackend offers an **End-to-End Cloud Platform** specifically for satellite and payload companies, streamlining the entire process of payload assembly, integration, automation, and remote operations across **LEO, the Moon, and beyond**. With our **Payload Operational Stack as a Service**, we provide the tools and infrastructure to rapidly deploy and manage payloads, enabling seamless, scalable, and cost-effective space missions. Experience a future where payload integration timelines are drastically reduced, and mission success is guaranteed through advanced automation and AI-driven solutions.

Addressing Your Key Challenges:

- Spending Months Implementing ICD Software Interfaces?
- Facing TM/TC Compatibility Issues in ground and On-board segments?
- Facing Problems During Testing Integrated Payloads?
- Missing continuous Payload integration?
- Lacking Direct, User-Centric Access to Payloads?
- Developing TM/TC Dashboards for Every Payload?

Our Solution:

AI-Driven Abstraction Framework for Modular Payload Integration

SpaceBackend's **AI-Driven Abstraction Framework** simplifies the modular integration of diverse payloads and platforms, bypassing the complexities of various standards and interfaces to enable plug-and-play operations and onboard intelligence. Our AI framework supports **ICD automation**, **continuous payload integration throughout the entire lifecycle**, and **automated operations** for any connected payload, ensuring seamless and efficient mission execution.

Value Proposition:

- **65% Faster Payload Integration Process:** Achieve up to 65% faster integration of payloads with spacecraft platforms, reducing setup time from years to just a few months.
- **75% Savings on Custom Flight Software Development:** Cut costs for custom flight software development by up to 75%, making payload integration more affordable and efficient.
- **One AI Engine for Any Payload:** Leverage a single AI engine to deliver automated operations and advanced onboard intelligence for any payload, simplifying management and boosting mission success.
- **Speed Up Payload Software Development:** Accelerate your development timeline by reducing months of work on C&DH software for payload controllers with our innovative generic payload driver.

How It Works:

- ① **Design & Configuration:** Drag-and-drop design and configuration of platforms and payloads to auto-generate onboard and ground segment software.
- ② **Deployment:** Deploy onboard software to enable modular payload integration, plug-and-play remote control intelligence, and onboard automation.
- ③ **Testing:** Automatically run the required tests for integrated payloads for validating the end-to-end Payload operations.
- ④ **Operations:** Manage multi-tenant operations of connected payloads, supporting continuous monitoring, maintenance, data analytics, and monetization in the cloud.

Applications & Use Cases:

- Earth Observation
- Telecommunications
- Microgravity Experiments
- Technology Demonstrations
- In-Orbit Manufacturing
- In-Orbit Servicing
- Lunar Exploration
- Scientific Missions

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Get Started on Revolutionizing Your Payload Integration

Contact Us