ACCELERATING INNOVATION IN SPACE

Space is no longer the exclusive domain of a few government agencies—it now offers opportunities to organizations of nearly any size. This evolution stems from ongoing research and development (R&D) focused on fuel-efficient, lightweight, and reusable rockets, mass-produced small satellites leveraging commercial off-the-shelf (COTS) components, and increasingly compact and powerful sensors and communication systems. The next challenges facing our space industry are reducing the start-up costs of bringing these innovations to market, expanding production, improving survivability, and boosting sensor capacity and data-transmission speeds.

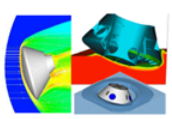
Concept to Advanced Design and Testing

Whether you're analyzing vibration and payload survivability, evaluating rocket dynamics at hypersonic speeds, aiming to land a probe on a distant planet, or predicting satellite and sensor performance in extreme environments, Altair's AI-powered solutions deliver. From rapid "what-if" studies to detailed component analysis and full-system performance validation, the Altair® HyperWorks® design and simulation platform provides scalable solvers and powerful pre- and post-processing workflows to support success at every stage.

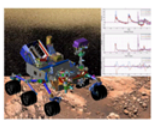
To serve an industry that is running at supersonic speed, Altair's solutions are optimized to leverage GPU clusters and advanced HPC architecture for faster and more efficient simulations, regardless of scale or complexity. The Altair HPCWorks® platform makes high-performance and cloud computing fast, efficient, and productive—whether your resources are on-premises, in the cloud, or a hybrid mix. Altair's unmatched HPC solutions provide seamless compute access, control, and resource optimization to make discovery and innovation possible in aerospace.

Launchers

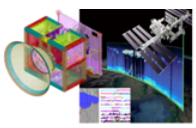
Capsules



Probes



Satellites



Structures

> JetZero uses Altair technology because it helps us deliver on our mission of making the biggest leap forward in aviation since the dawn of the jet age. With FlightStream and other tools within the Altair portfolio, our team can run the simulations on an accelerated time frame, at scale, and with the simplicity we need to transform an industry. The Z4 airplane is inevitable, and Altair is helping us to shape the future of aviation.
>
> Tom O'Leary
> co-founder and CEO
> JetZero

Learn More

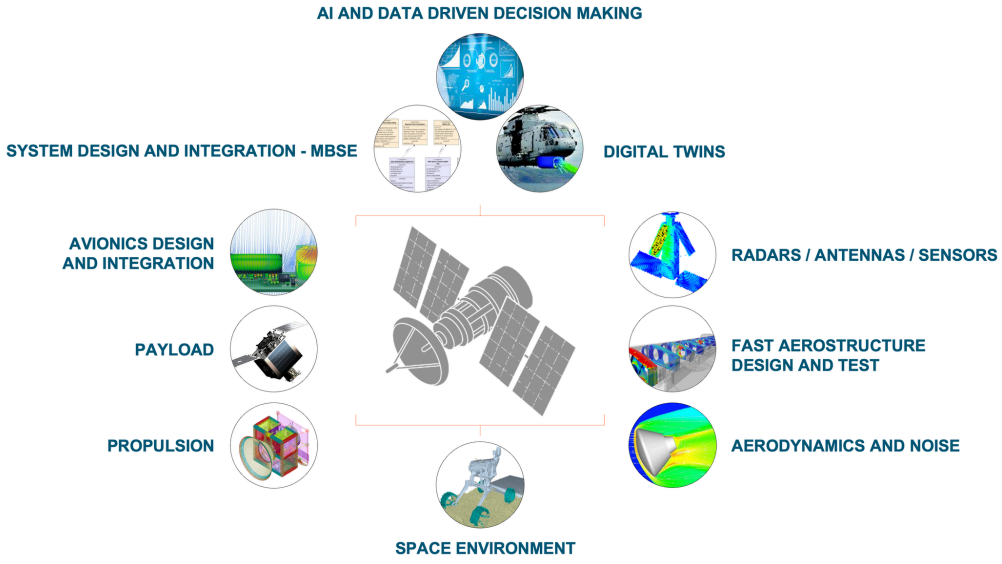
Far Beyond Simulation

Developing next-gen aerospace systems requires more than simulation alone. Whether you're monitoring the health of a satellite, launcher, or probe; optimizing asset production; making the most of limited test data; or harnessing sensor data in real time, the Altair® RapidMiner® data analytics and AI platform helps you move faster. With its powerful no-code/low-code environment, you gain actionable insights sooner—acclerating development and enhancing mission success.

1000x ▲
FASTER SIMULATION

Cost ▼
WITH ALTAIR UNITS

Digital Solutions for the Space Industry



A Complete and Open Technology Stack for You

Instead of needing a license for every user and software product, your organization shares a single pool of Altair Units: virtual tokens that empower your workforce to leverage any of the software solutions in Altair's AI-powered simulation, data analytics, and HPC platforms. Users borrow units to complete tasks, then return them to the pool when finished for others to use, giving your team extreme flexibility and unparalleled value that maximizes use and minimizes cost.

Are you a startup?
Don't miss our acceleration program:
altair.com/aerospace-startup-acceleration-program