

ALTAIR[®] INSPIRE[™]: ACCELERATE SIMULATION-DRIVEN DESIGN

<u>Altair[®] Inspire[™]</u> is an intuitive, best-in-class solution that accelerates simulation-driven design from concept to reality, significantly reducing time to market. By streamlining performance and manufacturability early in the design process, Inspire empowers users to develop and manufacture high-performance products in a single, unified environment.

Inspire is a one-stop shop for technologies that augment the design process, helping users leverage the power of simulation, AI, and high-performance computing (HPC) to develop validated, manufacturing-ready designs.

Accelerate Design from Concept to Reality

- **Geometry Creation and Modification:** Supports use of parametric surfaces, solids, polyNURBS, facets, and implicit modeling within the same model.
- **Computational Physics for Rapid Exploration:** Makes complex physics simulations accessible and designer friendly, enabling rapid, accurate analysis of structural, fluid flow, and motion dynamics.
- **Design Optimization for Topology and Beyond:** Goes beyond standard topology optimization, incorporating AI for generative design that produces practical, sustainable products.
- **Manufacturability Analysis:** Evaluate processes like casting, metal forming, injection molding, metal and polymer extrusion, polyurethane foaming, and additive manufacturing early to prevent defects and costly retooling.

Benefits

- **Design Faster:** Save time by beginning with concepts that meet structural requirements, cutting down the traditional design-validate-redesign cycle.
- **Design Smarter:** Easily modify package space, connections, load conditions, and shape controls for "what-if" scenarios. Use Altair's advanced AI technology for deeper, unexpected insights.
- **Design Lighter:** Optimize material placement for structural efficiency, exploring lattice structures to further reduce weight, decrease material costs, enhance performance, and lower shipping costs.













Capabilities

- Unified design for manufacturing (DfM) solution for traditional and advanced metal and polymer processing.
- Advanced generative design techniques including topology, topography, size, and shape, enhanced by Altair's Al technology.
- Implicit and field-driven design to create and optimize complex systems with computational efficiency.
- Lightning-fast design generation and analysis facilitated by GPU acceleration.

- Powerful solvers for part and assembly optimization and analysis.
- Photorealistic rendering and animation.
- Embedded meshless solver for FEA that enables implicit modeling, structural optimization, fluid flow analysis, thermal, and motion dynamics.
- Enhances collaboration, accelerates evaluations, and ensures superior, manufacturable products through tailored solutions and domain-driven workflows.



Designed to democratize access to powerful, modern software solutions for small businesses and multinational corporations alike, Inspire offers multiple editions, all accessible through <u>Altair One</u>[®]. Inspire Standard is available for businesses, Inspire Academic for schools, universities, students, and researchers, and Inspire Personal is ideal for non-commercial use, home projects, and first-time users looking to try the software.

To learn more, scan the QR code above or go to <u>altair.com/inspire/compare</u>



The innovative design of a GPU heatsink, showing the power of implicit modeling technologies within Inspire.