



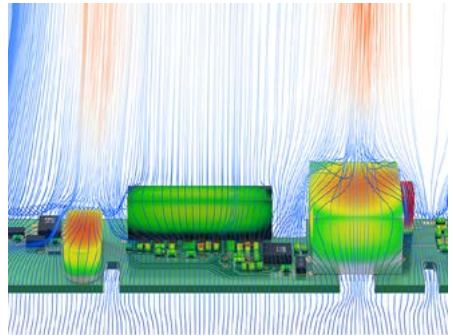
# **ELECTRONIC SYSTEM DESIGN**

[altair.com/esd](http://altair.com/esd)

Smart connected devices are everywhere, in homes, in transportation, and at work. This means electronic system design (ESD) is having a greater influence on almost every type of product requiring new simulation tools to help achieve electronic, electrical, mechanical, thermal, and connectivity goals. Altair's simulation-driven design tools enable your team of specialized engineers to collaborate across all aspects of printed circuit board development from concept to manufacturing. Our products streamline your process, eliminate design iterations, and reduce time-to-market.

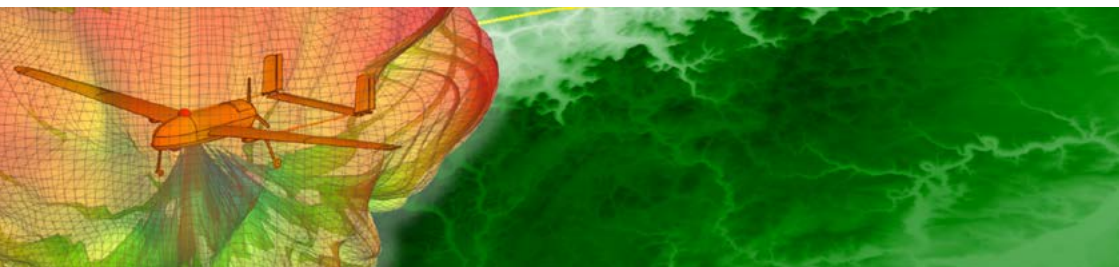
## PRODUCT PERFORMANCE

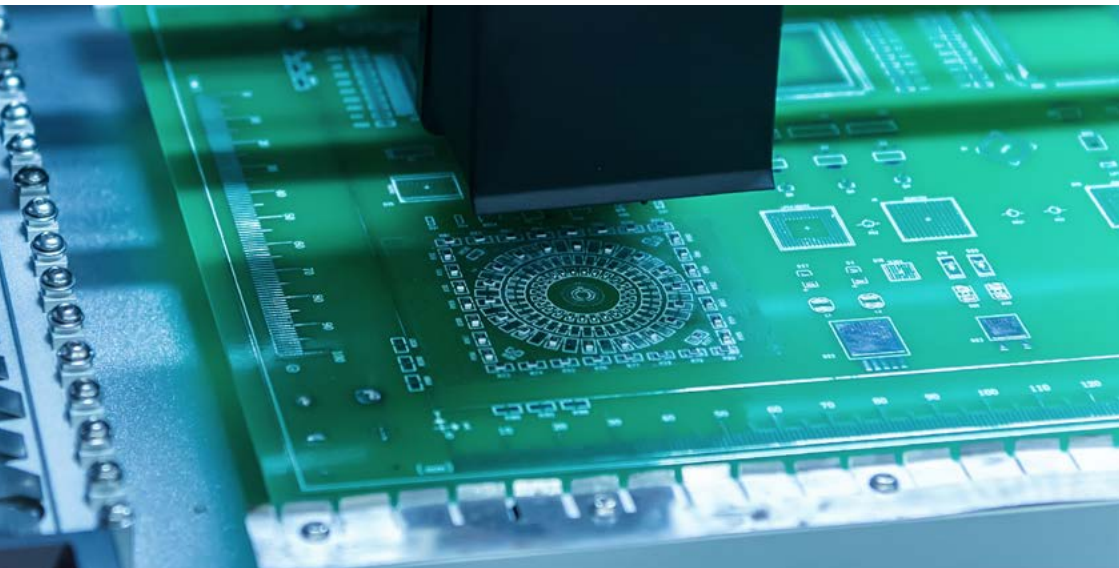
Altair® SimLab® accurately analyzes the performance of complex assemblies under real world conditions before physical prototyping. Highly automated workflows drastically reduce the time spent creating models and interpreting results. Confidently identify and correct potential design issues earlier in development with thermal analysis that doesn't require advanced CFD knowledge. Automate structural stress, vibration, and drop test performance assessments. SimLab even models fiber orientation during the injection molding process of plastic enclosures and manages structural solver coupling.



## WIRELESS CONNECTIVITY

Altair® Feko® enables teams to optimize wireless connectivity, including 5G, ensure electromagnetic compatibility (EMC), and perform radar cross section (RCS) and scattering analysis. It is the leading tool for understanding and optimizing antenna placement and coupling. Installed antenna performance is heavily dependent on how and where antennas are integrated. Feko is extensively used for immunity and emissions analysis of cables, antennas, and other devices. It simulates wireless coverage and enables radio network planning for a building, campus, city, or region.





## PCB DEVELOPMENT

Altair® PolEx™ accelerates the development of today's smart, connected, and tightly packaged electronic products. PolEx enables teams to review and improve board layouts, and drive designs with simulation tools for signal integrity, power integrity, EMI vulnerability, and ESD protection, without relying on "rules of thumb." Used by global industry leaders to increase the efficiency of PCB fabrication, assembly, and end-of-line testing, PolEx improves performance, enables teamwork, and enhances collaboration to ensure timing, performance, reliability, and compliance targets are met.

## SENSORS AND ACTUATORS

Accelerate the design of motors, sensors, actuators, and wireless charging with Altair® Flux® simulation to elevate performance and reduce power consumption. Altair® FluxMotor® is dedicated to the fast exploration of new motor concept designs. Integrate models for mechanical, electrical, and controller subsystems to simulate a full system with Altair Activate® and exchange models to co-simulate with other CAE tools using functional mockup interface (FMI).



## CIRCUIT SIMULATION

Circuit simulation plays a strategic role in the schematic capture phase of EDA workflows. The enhanced proprietary version of SPICE, based on the open-source industry standard, with access to the library of digital component suppliers, delivers a more interactive schematic in which easy changes of component values, tolerances, frequency response, or time periods enable an accurate verification of the electronic circuit performance.

## EMBEDDED CODE

Altair Embed<sup>®</sup> is a proven tool for model-based firmware development of embedded systems including analog and digital communication systems at the physical layer motor control, IoT devices, and vision systems. With Embed, you can design, analyze, and simulate your embedded system using block diagrams and state charts, then automatically generate compact and optimized code to run on an extensive selection of microcontrollers.

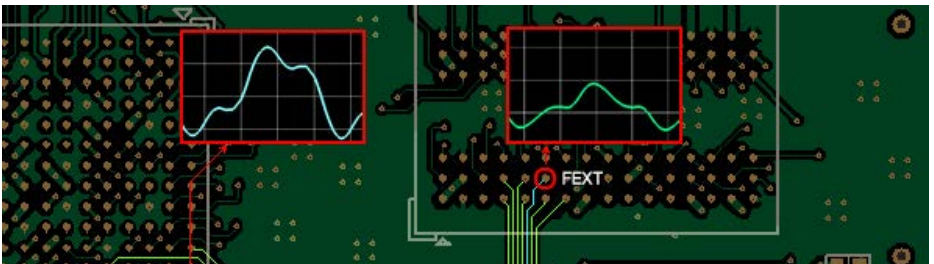
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### Expanded Options. Faster Results. Better Products.

For more electronic systems design software to complement your existing Altair electronic systems design toolbox, the APA has solutions to fuel your innovation. Simulate electronic systems design performance across circuit, component, and system design. Our partner products feature an integrated workflow to help you achieve design success high-speed electronics, electromechanical component, communications systems, and more.

These tools and more available are available through your Altair Units license.

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# DISCOVER HOW ALTAIR CAN REVOLUTIONIZE YOUR APPROACH TO INNOVATION

Altair pioneered a patented, units-based, subscription licensing model for software which has transformed the way our customers streamline product innovation and get to market faster. Customers have full access to all our software instantly, including more than 150 partner products, and can run these applications on-demand locally or in the cloud. Packaged as a comprehensive set of applications, our units-based structure is scalable, shareable, and more cost effective than obtaining individual licenses.

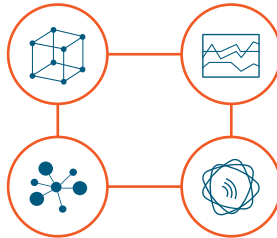


## POOL OF UNITS

Users draw units from the pool to access multiple products, across any location.

## CHOICE OF APPLICATION

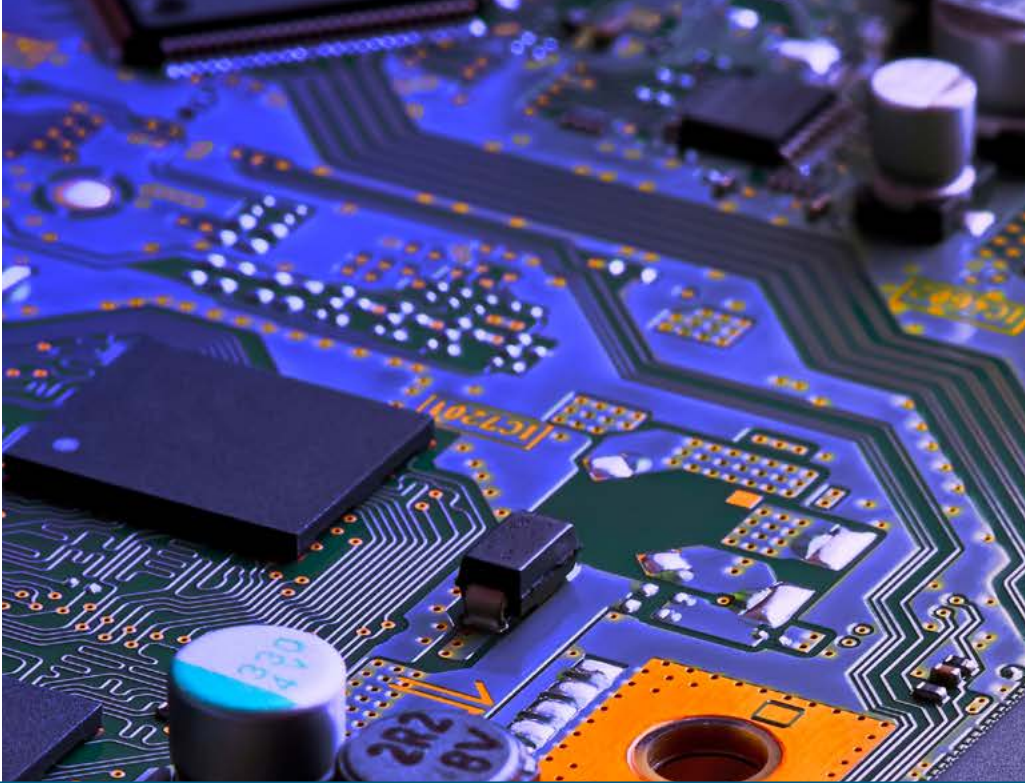
Maximizing software dollars through the flexibility of choice.



## FREEDOM TO USE HOWEVER NEEDED

Best of all, you can maintain your license and run workloads anywhere your team's infrastructure is located, on your workstations, servers and HPC resources that are on premises, in the cloud or in a hybrid environment.





Altair is a global technology company that provides software and cloud solutions in the areas of simulation, high-performance computing (HPC), and artificial intelligence (AI). Altair enables organizations across broad industry segments to compete more effectively in a connected world while creating a more sustainable future.

To learn more, please visit [altair.com](https://www.altair.com)



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