



Summary

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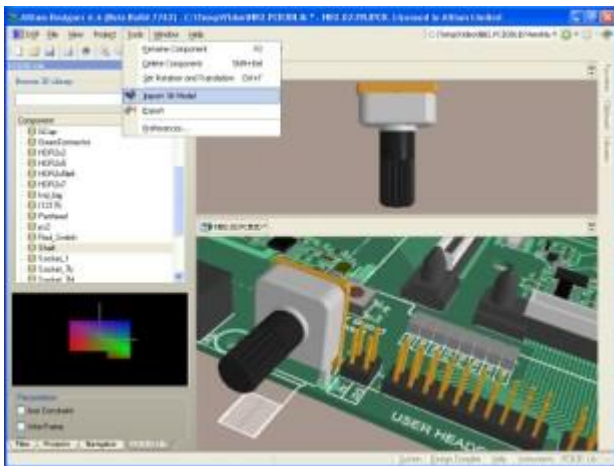
Altium has reinforced its unified approach to the wider sphere of electronic product development with a number of newly-added Altium Designer features, including STEP file support for high level and more efficient interaction with the mechanical design process.

Advances in technology is causing the convergence of all design disciplines, including a higher level of interaction between the electronic and mechanical design processes, creating the need for more efficient systems to facilitate team collaboration. The introduction of the advanced STEP 3D file format strengthens Altium Designer's links with the mechanical CAD (MCAD) environment, leading to a smoother and more efficient concept-to-manufacture design flow through the free and accurate exchange of ECAD/MCAD 3D design data.

The next STEP in 3D data

Initially introduced as a successor to the IGES graphics exchange specification, the STEP (Standard for the Exchange of Product model data) format has undergone a series of development stages as the international standard specification ISO 10 303.

STEP is a system-independent and multi-level format that is capable of delivering a data-rich exchange of information between mechanical and electronic systems. STEP import and export capability is now available in a wide range of popular MCAD applications.



For Altium Designer this means that highly accurate and comprehensive 3D model data can now flow to and from the MCAD environment. With the release of Altium Designer 6.6, component model data in the STEP 3D format can be imported directly into an Altium Designer PCB 3D library file (*.Pcb3DLib, Tools » Import). The 3D model can then be associated with the schematic component, in the same way that footprint and simulation models are. An accurate visualization of components on board assemblies can then be performed using Altium Designer's 3D Viewer, which is launched from the PCB Editor's View menu. The 3D Viewer also features the ability to export complete board assemblies as a STEP file (Tools » Export), opening the opportunity to work in an interactive and collaborative way with mechanical designers by bringing together the ECAD-MCAD design processes. The STEP component data is preserved in STEP format throughout the import/visualisation/export process, ensuring that the dimensional integrity of the mechanical data is maintained.

Working in harmony with the STEP model support, 3D component shapes can also be defined within Altium Designer using component body objects, ideal when a STEP model is not available, or a mechanically exact model is not required, for a particular component.

By providing accurate 3D representations of boards directly from the electronic design system, Altium Designer allows mechanical designers to start mechanical design earlier and proceed in parallel with electronics design. It also simplifies the electronic-mechanical design process and shortens the time needed to generate accurate mechanical board data. This means your design team can work more closely together and achieve greater efficiencies over the entire electronic product development process.

To see 3D component modeling in action watch the [Altium Designer STEP import/export demonstration video](#)

To read more about the need for higher levels of collaboration between the electronic and mechanical design domains see [ECAD-MCAD design integration](#)