



## What's in Altium Designer 6.8

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### Summary

Altium Designer 6.8 brings you innovative new features and capabilities that make electronic product design easier while enhancing productivity, so you can create better, smarter products in less time.

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**Altium Designer 6.8 is packed with new and updated features that open up future possibilities for all design engineers.**

Altium Designer 6.8 introduces a number of ground-breaking new concepts that will allow board-level, embedded and system engineers to stretch their skills in new and innovative ways. With this release Altium Designer again pushes the boundaries of electronic product design.

Altium Designer 6.8 delivers new features and capabilities that make electronic product design easier while enhancing productivity, so you can create better, smarter products in less time. Innovative new features such as 3D Visualization, Signal Harnesses and the OpenBus system help you develop advanced designs easier by making the process more intuitive and 'abstracting away' the underlying complexity.

The release also delivers new productivity-enhancing features that help you bring designs to market faster. These include reusable Device Sheets, C-to-hardware compilation, and a highly-configurable Publish to PDF OutputJob option. You will also be able to maintain a competitive edge by creating more advanced designs using new capabilities such as Interactive Length Tuning for Differential Pairs, support for the SIMetrix/SIMPLIS power simulation engine, the ability to place Board Cutouts and Barcode symbols, and expanded support for new Lattice, Actel and NXP devices.

Altium Designer 6.8 is a significant release, and brings the full benefits of a unified product development system to all design engineers.

**Some of the highlights of this new release are:**

#### **PCB Visualization**

Taking advantage of DirectX capabilities, PCB Visualization provides a unique and customizable 2D/3D viewing system that lets you view and edit all objects, including pads, via barrels, tented vias both on the surface and internally from a 3D perspective. Support has also been added for the hi-tech SpaceNavigator 3D mouse from 3Dconnexion®.

#### **Interactive Length Tuning for Differential Pairs**

You can now match the net length of differential signal pairs using Altium Designer's Interactive Length Tuning feature, which inserts variable amplitude patterns according to the available space, rules, and obstacles in your design. The target length can be driven either by rules, from another signal pair or manually.

#### **OpenBus**

The OpenBus system is a higher-level way to create processor-based FPGA designs that uses simple graphic elements to represent processor-peripheral interconnections in a more streamlined and abstract way. Much of the configuration required for getting a Wishbone system up and running is no longer needed, as the OpenBus System abstracts the complexity of a bus from a collection of signals into a single connection.

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## Device sheets for design reuse

Device Sheets are verified circuitry that are created and stored to quickly build-up resources of proven designs that can be reused at any time. They can then be placed and referenced in your project like a simple component, and are included in the project hierarchy when the project is compiled.

## DxDesigner Importer

Altium Designer's unified Design Translator has been updated to support the import of Mentor Graphics' DxDesigner® files. You can now translate complete DxDesigner designs, including schematics and library files, into Altium Designer using the smart Import Wizard.

## SIMetrix/SIMPLIS simulation support

In addition to the in-built SPICE 3F5 simulator, you now directly invoke an installed SIMetrix/SIMPLIS circuit simulation package. The powerful SIMetrix/SIMPLIS simulation engine has been optimized to provide unmatched simulation speed of switching circuits for power supplies.

## C-to-hardware compilation

You can now generate FPGA hardware from C source code to gain the performance advantage of dedicated FPGA logic, without using a HDL. Application Specific co-Processors (ASPs) are placed on the bus of a soft processor, allowing functions defined in the processor's embedded project to be 'pushed' into the ASP in the form of FPGA logic.

## Lattice SC/SCM support

The system now includes support for the LatticeSC and LatticeSCM (collectively, the LatticeSC/M) families of high-performance FPGA devices. Developers can now target designs for LatticeSC/M devices with full synthesis support.

## New LiveDesign instruments

Three new LiveDesign Instruments are available; a Wishbone-compatible Terminal console for text-based debugging; a Configurable Digital I/O interface for display and manipulation of input/output buses; and a CrossPoint Switch that helps you debug by controlling the switching inputs of multiplexers.

## Publish to PDF

This new feature lets you to build custom PDF documents from the OutputJob Editor. Any number of Schematic, OpenBus and PCB outputs including all printable Assembly Drawings, Documentation Outputs and Fabrication Outputs can be combined together into a single PDF document.

Read more about Altium Designer 6.8 at <http://www.altium.com/Evaluate/DEMOCenter/WhatsnewinAltiumDesigner/>

To download the 6.8 update, visit the Altium SUPPORTcenter at <http://www.altium.com/supportcenter/>