

WHY MOVE FROM P-CAD TO ALTIUM DESIGNER?

Altium Designer™

1 Altium Designer is unified

Making the move to Altium Designer is not just about FPGAs or programmable devices. The benefit of a unified approach provides a level of design synchronization far above that possible with integrated point tools such as P-CAD. In Altium Designer you have unprecedented freedom to push design changes back and forth between schematic and PCB documents and to maintain synchronization between the domains. This allows for productivity-enhancing features such as system-level support for multi-channel design, sophisticated cross-probing, integrated component libraries and project-level design reuse.

While you may not be dealing with FPGAs currently, industry feedback suggests that over 70% of boards now include at least one FPGA, and this figure is increasing. As FPGAs get bigger, faster and cheaper, they will find their way into more and more applications and be used to speed development and allow more intelligent products to be brought to market quicker. If you are not using a system that allows you to take advantage of programmable devices then you will become less competitive as a designer in the future. By moving to Altium Designer you eliminate this risk.

The big picture of unified design is more than just the convergence of previously separate design activities; it is about exploiting the latest technologies in new and innovative ways to improve the design experience and bring products to market in record time.

2 Altium Designer provides the most seamless transition

Altium recognizes and wants to retain the loyalty of its P-CAD customers. While the retirement of the P-CAD product line will be disappointing to some of you, we believe that Altium Designer represents your best path into the future and will ultimately open new and exciting design possibilities to you.

Altium is dedicated to providing outstanding support for all customers migrating to Altium Designer, and this is particularly true when moving from P-CAD. Because we know both products intimately, we can offer a far less disruptive transition than will be possible with tools from other vendors. Not only that, we will ensure that moving to Altium Designer will be your most cost-effective option.

3 Altium Designer holds the keys to your future

Altium Designer future-proofs your organization by providing you with the tools required for the latest design technology and techniques, plus those needed to take you into the future. Altium Designer provides a single unified system that supports the entire development process of modern electronic products, including those with high-speed and programmable devices.

Combined with modern data management capabilities, the system offers refined board-level features including powerful new routing tools, full support for FPGA integration and high-speed facilities such as integrated support for differential pairs, targeted design rules and impedance-controlled routing.

Altium Designer has Altium's 100% commitment and delivers many benefits (including price) over alternatives, plus allows you to remain productive into the future.

4 Hierarchical design

Altium Designer supports a fully hierarchical design methodology which extends from the schematic right through to the PCB document. Not only can schematic detail be abstracted vertically to allow for tighter containment of critical circuitry, but multiple channels are also supported. The power of multi-channel design becomes obvious when designing systems that make repeated use of the same circuit topology. A 'master' circuit can be repeated many times over with the freedom of still allowing you to make modifications to component values within each channel. By maintaining the channel structure through to the PCB design, modifications made to the PCB can be propagated back to the schematic and design synchronization can be assured. Furthermore, additional channels can be easily added or deleted as the design evolves during development.

5 Enterprise-level design data management built in

Design unification not only brings design processes together but it also brings design data together. Managing design data has become an increasing problem for organizations seeking design efficiency and bringing their products to market sooner. Altium Designer's unified environment supports rigorous data management and allows organisations to better control their design data through direct interfaces to CVS, Subversion and Microsoft's SCCI version control interfaces.

This means that design files can be directly checked in or out to a data repository from within Altium Designer – no need to shell

out and use cumbersome command line utilities. Furthermore, where different versions of a design file exist, Altium Designer gives the user the ability to graphically compare differences and quickly identify design changes and their impact on the overall product under development.

6 Enhanced design rule checking

Design rules are an important safety net and guidance tool when laying out complex PCB designs. They ensure design consistency and manufacturability. Trapping errors at design time not only saves you money in board manufacturing costs but also gets you to market faster, thereby increasing your revenue. The design rules in Altium Designer are not only more extensive than those found in P-CAD but they can also be more precisely and flexibly scoped, and prioritised, in ways not possible in P-CAD.

7 Flexible project structure

The project concept in Altium Designer not only allows for extensive ERC and DRC to be done across the entire design, but it also offers the ability to store additional ancillary information to the project. There is no limit to what can be stored within the project structure, so component libraries, test data, design calculations, contractual information, datasheets, etc., can all be stored with the project. Anytime the project is loaded, all of its associated information will be there at your fingertips.

8 Support for the latest PC and graphics-processing technologies

Altium Designer supports multiple monitors and, because of its unified structure, allows you to open a schematic in one window and the PCB in another, and cross-probe between the two documents. Alternatively, you could choose to work from one monitor and use the second monitor to house any number of the intelligent and informative panels that keep relevant design data at your fingertips.

Altium Designer's support for the latest DirectX graphics hardware acceleration gives PCB performance increases in excess of 20 times over standard drawing modes, which translates to an incredibly fluid and responsive PCB interface. Furthermore, Altium Designer also supports multi-threading, which maximizes the utilization of the available processing resource on your PC.

9 Extensive library management capabilities

Component symbols and footprints can be stored separately, joined into an integrated library, or linked to an ODBC database depending on the work flow you choose to adopt. If you choose the database option, component parameters need not be stored in the schematic along with the component symbol, but can be pulled directly from the database when BOM reports are run ensuring the most up-to-date information is only ever included.

Also, Altium Designer's version control interfaces enable you to individually version control components within the library structure and ensures you maintain a complete history of component changes. Furthermore, Altium Designer does not have any problems with multiple users simultaneously accessing the same library which facilitates a centralized library structure and ensures all designers are using the same approved library components.

10 Advanced manufacturing output generation

Altium Designer's extensive selection of manufacturing outputs and custom report capabilities means that you can generate post-design data in exactly the right format to ensure seamless hand over to manufacturing. With complete Gerber generation and manipulation tools, Altium Designer lets you scrutinize every last detail of the design and provides you with a manufacturer's view of the PCB which minimizes errors being introduced by production facilities. Generating manufacturing data can be batched into an 'output job' that stores report preferences and ensures reports can be easily generated and will always maintain consistency.

Altium Designer also includes a revolutionary Smart PDF wizard that allows you to create a portable and fully-indexed PDF of your design data. This makes the dissemination of your design data an absolute breeze and allows all stakeholders to view design documents without needing Altium Designer loaded on their PC.

Altium Designer is the design tool

that will allow you to tackle the

future head on.

Its unified design environment will give you enhanced productivity today whilst ensuring you are armed to deal with the technologies and challenges of tomorrow.

Altium Designer –
Unified Electronic
Product Development