

Waters Corporation Chooses BluePrint-PCB® as Enterprise-Wide Documentation Solution

Customer Requirement

Waters Corporation required an easy-to-use, customizable and CAD-tool independent solution for creating comprehensive documentation.

DownStream Solution

BluePrint-PCB®

Results

Within days of installing BluePrint-PCB, Waters was creating very detailed documentation, saving valuable time for their designers. In addition, Waters uses BluePrint-PCB for creating all Fabrication and Assembly drawings and managing Parts Lists for all PCBs.

Company Overview

Founded in 1958, Waters Corporation (www.waters.com) is a global manufacturer of advanced liquid chromatography (LC) and mass spectrometry (MS) systems, thermal analysis and rheometry instruments, LC and MC consumables and software. Waters products are purchased by university, independent and government laboratories as well as pharmaceutical, food and beverage, and personal care product development and quality control laboratories.

Waters Corporation, a publicly traded corporation (NYSE:WAT) headquartered in Milford, Massachusetts, operates in 27 countries with more than 5,000 employees and reported \$1.58 billion in 2008 revenues. In 2009, *BusinessWeek* Magazine added the company to its *BusinessWeek* Top 50 rankings.

Customer Situation

Waters Corporation's new product development process utilizes printed circuit board (PCB) design solutions from Mentor Graphics®. During a company-wide migration from Mentor's BoardStation® PCB design tool suite to their Expedition® solution, Waters identified documentation as a major weakness in their current design process. They felt their methods were not efficient because the tools they used were not created specifically for documentation, the process was not standardized across the enterprise and the resulting documentation was never as comprehensive as it needed to be. "While we were very happy with our decision to stay with a Mentor PCB Design solution (Expedition) we felt we needed a more comprehensive and forward-looking PCB Documentation tool," said Robert Laman, Engineering Apps Manager for Waters. "The previous solution we used fell well short of our overall requirements," he added.

Customer Goals

Waters was looking for a tool that offered a completely new methodology for creating PCB documentation, one that allowed their designers to focus on what they do best — PCB design. Such a tool would need to combine several often conflicting attributes — reduce the time required to create PCB documentation while at the same time creating more detailed documentation, seamlessly integrate with the EDA Vendor tool flow and be easy-to-use and maintain.

Laman's group came across BluePrint-PCB® and began to investigate its ability to meet their requirements. "We were very impressed with the product's capabilities. At least on paper, it was the only tool on the market that showed any promise of meeting our goals. We undertook an evaluation and quickly learned that BluePrint brought even more to the table than we expected. It not only helped us address the problems we knew we had, but it also brought additional benefits we had not considered as a requirement," said Laman.

BluePrint Solution

Water's recognized that documentation was a critical part of the PCB design flow as it defines the specification on how an electronic product is to be built. The more detailed the documentation, the less likely manufacturing mistakes will occur. Comprehensive documentation also ensures that repeat builds of the same product are consistent, reduces manufacturing deviations and makes final inspections easier.

Prior to engaging with DownStream, Waters used a myriad of tools to create their PCB documentation. The process was long, cumbersome and never as complete as it needed to be. "We continually spent more time than we expected creating our documentation and never seemed to get exactly what we needed. I knew we needed to find a better solution," said Laman. "When we found BluePrint, we were amazed not only how comprehensive the tool was but also how easy-to-use it was. Within a few days we were able to create very detailed documentation, and do so in minutes instead of hours and hours instead of days," he added.

BluePrint's patent-protected technology allows the PCB CAD database to be imported and then automatically creates and links unlimited PCB views and details, while at the same time maintaining the design intelligence. In addition, any change made in the CAD file can be quickly updated in BluePrint by

simply re-importing the new CAD data back into BluePrint. Once imported, BluePrint updates all instances of the CAD data in the documentation automatically, greatly reducing the amount of time to make these changes when compared to the alternative methods. "Prior to BluePrint, Engineering Change Orders basically meant re-creating our documentation from scratch. With BluePrint, we simply re-import the CAD data and it creates a new set of documentation in minutes. This saves us a tremendous amount of time," said Laman.

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Waters has implemented BluePrint-PCB enterprise-wide for the creation of all Fabrication and Assembly drawings. An additional time-saving benefit has been realized because they use the product to create and manage Parts List for their PCBs. This allows a designer to start with a "generic" Parts List to begin the PCB design process and then marrying the "final" parts list — including all Waters parts attributes — later in the design process.

After making BluePrint the standard solution for creating PCB documentation across the enterprise, Waters realized other significant, unplanned benefits. "As Waters has grown through acquisition, were able to deploy BluePrint with the legacy PCB CAD tools we acquired because BluePrint is CAD-tool independent," said Laman. "In addition, because so much manufacturing is done offshore, BluePrint allows us to create a complete, electronic release package that can be viewed and shared by everyone along the manufacturing process," he said.

"BluePrint has allowed us to greatly reduce the time required to create very detailed PCB documentation — what used to take many hours now takes only a few minutes. With BluePrint, there is never a reason for a manufacturer to interpret what the design intent was because the documentation and instructions are so complete," said Laman. "It reduces our risk significantly and gives my team the confidence it needs and in today's competitive environment, that is worth more than anyone can imagine," he commented.



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