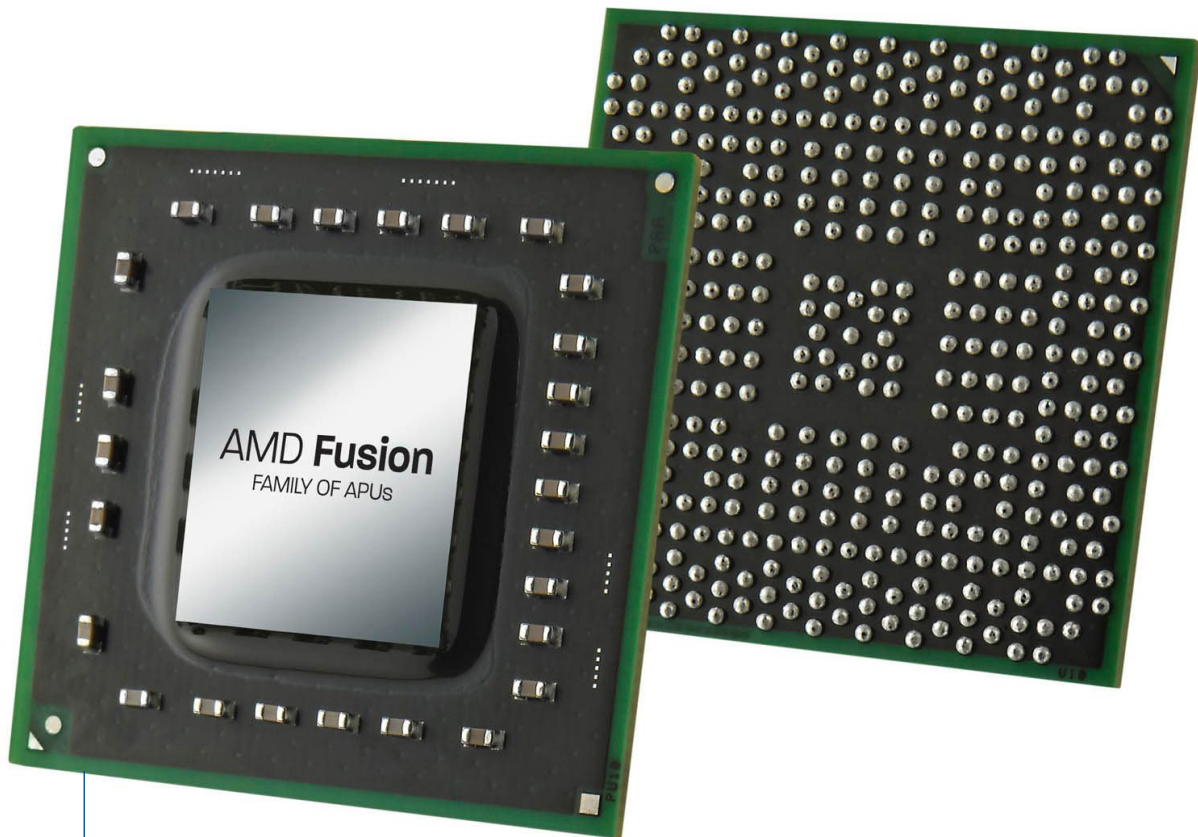


ADVANCED MICRO DEVICES

CONNECTING MECHANICAL AND ELECTRICAL DESIGN
WITH SOLIDWORKS



AMD improved collaboration among its distantly located thermo-mechanical engineering groups using SOLIDWORKS Premium design and SOLIDWORKS Enterprise PDM product data management software.



Challenge:

Improve collaboration among distantly located thermo-mechanical engineering groups, as well as between mechanical and electrical engineers.

Solution:

Implement SOLIDWORKS Premium design and SOLIDWORKS Enterprise PDM product data management solutions to connect separate sites and integrate mechanical and electrical designs.

Results:

- Reduced file transfer times from hours to minutes
- Eliminated prototype boards, saving thousands of dollars annually
- Shortened file search time dramatically
- Improved collaboration between mechanical and electrical engineers

As a semiconductor design innovator, Advanced Micro Devices (AMD) is leading the next era of vivid digital experiences with its groundbreaking computer processing and graphics acceleration chips. AMD's graphics and computing technologies power a variety of solutions, including PCs, gaming consoles, and the servers that drive the Internet and businesses around the world.

The chip manufacturer's Austin Mechanical Design team is responsible for designing thermal/mechanical solutions for its internal and external products. For example, AMD's popular Processor-in-a-Box product line delivers processors with custom-designed thermal solutions that are ready for installation directly on computer motherboards. The thermal solutions meet all required thermal, acoustics, shock, and vibration performance requirements, enabling customers to quickly and easily install processors in their systems and have a positive user experience.

The design team began operations in the 1990s and has continually grown as demand for its products increased. After initially using several different mechanical design software tools, the group decided to standardize on SOLIDWORKS® Premium 3D design software, according to Jabir Yusufali, a member of the technical staff.

"SOLIDWORKS was easy to use and gave us the ability to work more efficiently with the electrical engineers who design the chips," Yusufali explains. "However, as we grew, we here in Austin (TX) also needed to work more closely with colleagues in Sunnyvale, California, and Singapore. In 2005, we implemented SOLIDWORKS Enterprise PDM (product data management) software to manage our design data across all three locations." Since then, the team has added replicated servers in Shanghai and Bangalore to collaborate with engineers at those sites, bringing the total number of globally synchronized sites to five.

Today, AMD's distributed engineering team relies on its 15 licenses of SOLIDWORKS Premium design and SOLIDWORKS Enterprise PDM product data management software to develop its products. "We chose SOLIDWORKS Enterprise PDM for many of the same reasons that we chose SOLIDWORKS. The system is more geared toward the end user, and the user interface is very intuitive because it looks and feels like you're working in a Windows® file-folder structure," Yusufali says.

CIRCUITWORKS CONNECTS MECHANICAL AND ELECTRICAL DESIGN

Using the CircuitWorks™ tools in SOLIDWORKS Premium software, AMD mechanical engineers are able to work directly with ECAD data by importing IDF files. This not only facilitates collaboration between mechanical and electrical engineers, but also saves time and money. "We use SOLIDWORKS and CircuitWorks to pull in board designs and clearly communicate information back and forth," Yusufali notes. "With this capability, we can more efficiently pinpoint issues and effectively relay that information back to our electrical engineers.

"Utilizing this approach, we catch things earlier than we would have without CircuitWorks," he adds.

INTERFERENCE CHECKING ELIMINATES PROTOTYPE BOARDS

In addition to facilitating collaboration between AMD's mechanical and electrical engineers, SOLIDWORKS interference checking tools have enabled the chip manufacturer to save money by minimizing the number of prototype boards required to verify mechanical fit and performance, saving the company thousands of dollars annually.

Before moving to SOLIDWORKS, physical prototype boards were built to verify mechanical fit. By using CircuitWorks and SOLIDWORKS interference checking tools, the group can identify clearance and interference issues in software, eliminating the need to produce as many prototype boards.

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— Jabir Yusufali, Member of the Technical Staff

INTEGRATING FIVE LOCATIONS WITH PDM

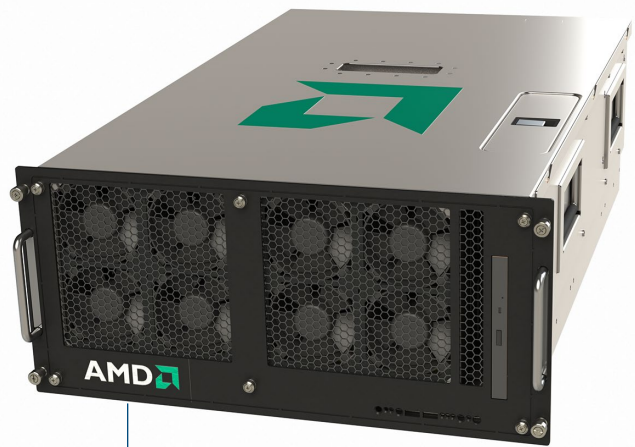
The implementation of SOLIDWORKS Enterprise PDM software has allowed AMD engineers in Austin to work more closely and efficiently with similar operations in California, Singapore, Shanghai, and Bangalore. Prior to the implementation, emailing large design files back and forth and finding specific design files took too much time. Synchronization of the SOLIDWORKS Enterprise PDM vault and powerful search capabilities have resolved these issues.

"It used to take hours to transfer files back and forth among the various locations," Yusufali recalls. "With SOLIDWORKS Enterprise PDM software, sharing and accessing files is down to a matter of minutes because the vault updates daily, and only changed files are updated. The software's search capabilities are also excellent. The indexed search is very fast, and it's now much easier to find specific design files. The system makes collaboration both more efficient and effective."

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For more information
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With SOLIDWORKS Enterprise PDM software, AMD engineers in Texas can work more closely and efficiently with engineering groups in California, Shanghai, Bangalore, and Singapore.

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