Design, Simulate and Innovate

AMD FirePro™ professional graphics is certified and optimized for NX 8.5 and enables advanced CAD/CAM/CAE workflows with high performance and reliability.

SIEMENS

Industry:
Manufacturing (CAD/CAM)

Applications:
Siemens PLM Software: NX 8.5

Challenges:
- Faster time-to-market
- Competitive pressure
- More demanding designs

Solution:
- AMD FirePro™ professional graphics are certified for NX 8.5 and enable advanced workflows for large enterprises

Value Propositions:
- Optimised and Certified for NX 8.5
- Powerful workflow performance gains with NX 8.5 and AMD FirePro™ professional graphics
- Greater productivity and collaboration gains with AMD Eyefinity technology
- Overall enhanced performance and interactivity
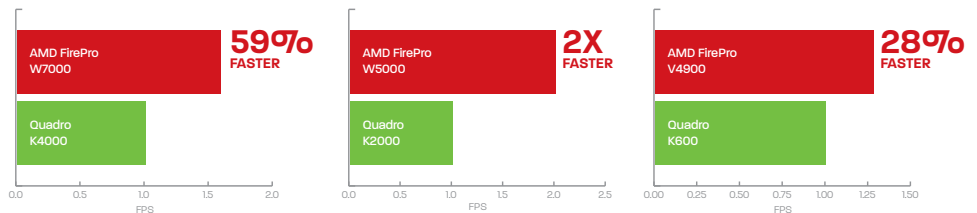
The AMD FirePro Advantage:
- Three-year warranty and extended availability – Compared to consumer graphics, AMD FirePro graphics cards have a planned minimum four-year lifecycle.
- Workstation-class customer support – Customers have the ability to contact the AMD technical team directly.
- Energy efficiency – AMD FirePro graphics cards are based on highly efficient GPU technology. A single card can power 3 (up to 6) displays minimizing heat and energy costs*.

Creating a Reliable Platform for Design Innovation

From start to finish, creating an efficient product development cycle has never been so critical. Great lengths are taken by many industries – including automotive, aerospace, consumer products and electronics - to create innovative and better quality products. Not only this, many companies face commercial challenges in reducing design and production costs while getting the product as quickly to market as possible.

Many design engineers today rely on NX from Siemens PLM Software, which provides a professional environment to design, manipulate, simulate and analyze product assemblies. High quality, real-time 3D modeling is essential to the entire product development process, with many assemblies having hundreds or even thousands of components. AMD FirePro™ professional graphics cards are designed and built for this purpose, with extensive testing and certifications by Siemens and AMD to ensure the highest level of performance.

NX8 Internal Benchmarks - Studio True Shading mode[1]

| AMD FirePro W7000 | **59% FASTER** |
| Quadro K4000 | |

FPS (0.0, 0.5, 1.0, 1.5, 2.0)

| AMD FirePro W5000 | **2X FASTER** |
| Quadro K2000 | |

FPS (0.0, 0.5, 1.0, 1.5, 2.0, 2.5)

| AMD FirePro V4900 | **28% FASTER** |
| Quadro K600 | |

FPS (0.00, 0.25, 0.50, 0.75, 1.00, 1.25, 1.50)

Greater Productivity and Collaboration with AMD Eyefinity Technology

Product development workflows have changed significantly over recent years. Working with multiple applications is common in many development workflows with design, simulation, data management and collaboration, all happening in unison.

It's also quite common to see design engineers throughout different stages of the product development line, to require a holistic view of a product assembly, while they work on the smaller component parts of the design. This provides engineers with a better understanding of the product and can help reduce design flaws.
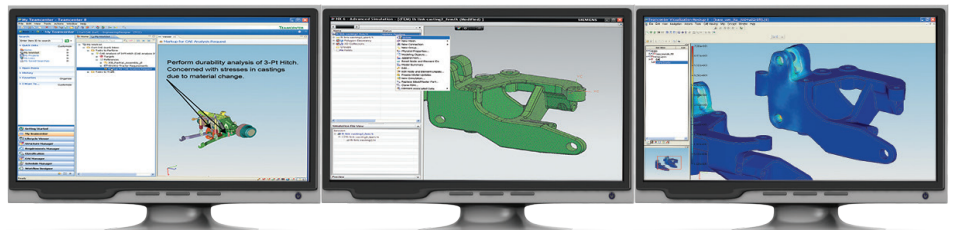
1. Simulation tasks are assigned and managed inside Teamcenter

2. CAE models are prepared using NX and simulations are executed

3. Simulation results are visually verified using Teamcenter Lifecycle Visualization

AMD FirePro graphics cards feature AMD Eyefinity multi-display technology that empowers engineers to view multiple applications and product assemblies across three, four or even six high-resolution monitors all from a single graphics card[2]. Designers can now relate product components to its corresponding Bill of Materials from Teamcenter, collaborate easily with small teams while retaining a holistic view of design and its components.
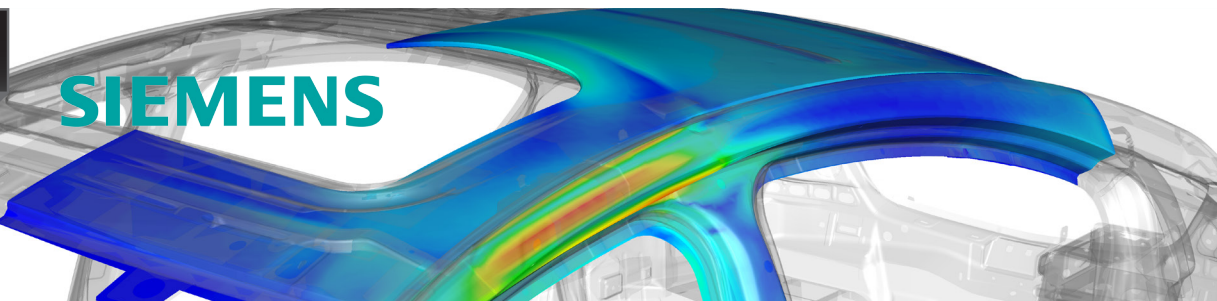
Leading Edge Software Needs Leading Edge Hardware

AMD FirePro professional graphics cards are packed full of leading-edge technologies to help ensure compatibility with the latest software applications and supporting system hardware. Built on AMD's Graphics Core Next (GCN) Architecture, the world's first 28nm GPU, AMD FirePro professional graphics provide efficient, multi-channel processing of rendering and computational commands. This provides a high performing platform for the entire Siemens PLM Software suite.

The latest AMD professional graphics cards also feature support for PCI Express 3.0, for increased data transfer between the system and the graphics card, helping reduce loading and rendering times of large assemblies. AMD FirePro graphics cards are available with 2GB, 4GB and even 6GB of GDDR5 on-board (frame buffer) memory, so engineers can visualize and simulate complex assemblies, while working with multiple applications which can help accelerate their product development workflows.

Using DisplayPort 1.2 as the standard for display connectivity, allows the use of the latest-generation of 4K Ultra High-Definition (UHD) displays with over 8 Megapixels of resolution. This provides never-before-seen pixel density from a single workstation display for maximum detail of your dataset.

Advanced, Realistic Assembles all in Real-time with True Studio

Design is playing an increasingly important role in many industries today. The ability to visualize a product early in the product development process has become crucial for success. Companies can validate the design before committing it, essentially reducing the overall risk associated with their decisions.

True Studio mode, a feature within NX, provides engineers with a realistic representation of their 3D models by applying complex shadows and lighting in "real-time", without the need for time-consuming renders. This helps engineer's analyze and visualise what the assembly would look like at a much earlier stage of the product development cycle.

However, viewing large assemblies with increased realism puts a higher demand on the GPU, reducing performance, interactivity and application responsiveness. Thanks to the large frame buffer memory and advanced GCN GPU architecture, AMD FirePro graphics cards are able to help increase the visual quality inside the NX modeling environments virtually without any loss of model interactivity. Users no longer have to manage a trade-off between visual fidelity and model complexity.
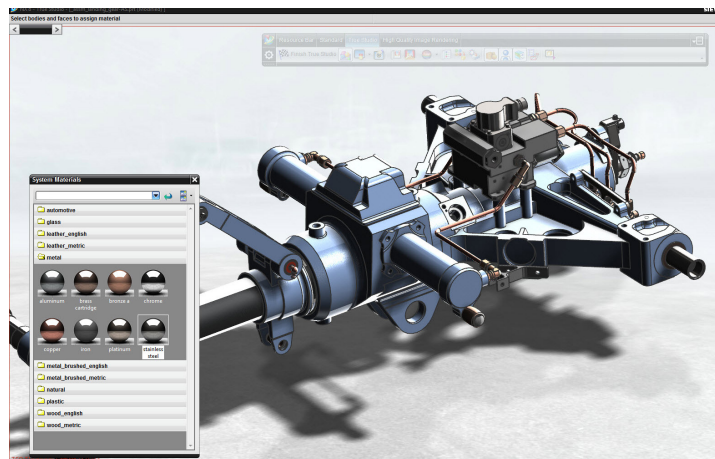
Conclusion

In conclusion, AMD FirePro professional graphics cards are designed to deal with the most intensive of tasks, with a range of solutions to suit the needs of different organizations and to address practically every stage of the product development process. With the highest levels of customer support and a 3-year warranty, more and more companies are choosing AMD FirePro graphics as the preferred choice for their workstation.

SIEMENS PLM SOFTWARE & AMD FIREPRO GRAPHICS RECOMMENDED CONFIGURATIONS

	Model Size and complexity	Visualisation	Simulation	PLM workflows	Replaces
AMD FIREPRO W7000	●●●	●●●	●●●	4 display outputs	Quadro K4000
AMD FIREPRO W5000	●●●	●●○	●●○	3 display outputs	Quadro K2000
AMD FIREPRO V4900	●○○	●○○	●○○	3 display outputs	Quadro K600

For more information visit

www.fireprographics.com/siemens