DIVISION™ MockUp
Create large-scale, realistic digital mockups

DIVISION MockUp, PTC’s industry leading digital mockup solution, leverages rich CAD data to create virtual 3D product prototypes. Now, all users—even those without installed CAD applications—can fully visualize, study and interact with the product.

DIVISION MockUp greatly reduces the need to build expensive and time-consuming physical prototypes. With powerful, 3D prototyping tools, DIVISION MockUp allows engineers to simulate product capabilities and validate product operations such as assembly and disassembly. In today’s increasingly global and competitive market, viewing a realistic and interactive virtual prototype can reduce product development costs and accelerate time-to-market.

Key Benefits

Reduce time-to-market
Companies typically create very few physical prototypes because they are time-consuming as well as prohibitively expensive. As a result, engineers must wait until late in the design process before seeing the actual product. DIVISION MockUp reduces overall product development time by allowing engineers to instantly visualize and dynamically analyze their product—at any point in the process, so potential issues can be quickly identified and resolved.

Improve collaboration
By utilizing a virtual prototype, distributed teams can easily collaborate, as everyone can simultaneously view and discuss the same interactive, realistic digital mockup. Digital mockups can be used for design reviews and analysis, assembly planning and packaging, maintenance studies, and sales and marketing campaigns. Such improved communication and collaboration accelerates the decision making process, as the design team and management can now rapidly review many design alternatives.

Reduce product development costs
Developing physical prototypes is a costly process. DIVISION MockUp significantly reduces the need for physical models by providing immersive and functionally rich virtual prototypes that can be created on-demand. By reducing the number of physical prototypes, you can minimize product development costs while enabling your distributed design team to virtually construct an unlimited number of design variations.

Increase product quality
DIVISION MockUp allows engineers to investigate realistic part behaviors and real-time mechanisms earlier in the product lifecycle. Many potential problems can now be quickly uncovered, analyzed and resolved during the development process. With the ability to discover issues that otherwise would have gone unnoticed until late in the product lifecycle, DIVISION MockUp can help your organization improve overall product quality.
Features

Design Analysis
- Import designs from Pro/ENGINEER® and other major CAD applications
- Fast, efficient, real-time collision detection
- Hard clash, soft clash, and clearance checks
- Multi-set clash test
- Interference checking
- Gather interference durations
- Real-time cross-sectioning
- Pivot point constraints
- Swept-volumen capture

Functional Product Simulations
- Define and verify assembly/disassembly sequences
- Create and verify removal paths in real time
- Study maintenance operations
- Validate part access
- Verify customer requirements using functional simulation mockups
- Develop interactive content for use in training manuals and other publications

Interactivity and Collaboration
- Rapidly load thousands of product components and gigabytes of CAD data
- Dynamically import sub-assemblies in real time as needed
- Fly through assemblies with real-time navigation
- Hear product-generated sounds using integrated audio tools
- Work within true multi-user environments
- Create, view and save interference reports

Open, Innovative Architecture
- Advanced API for custom adapters and feature add-ins
- Peripheral device integration
- High-performance graphics engine
- Feature level-of-detail technology
- Distributed multi-tasking and simulation engine
- Modular architecture allows DIVISION functionality to be easily utilized by other applications

Platform Specifications*
- Operating Systems
  - Microsoft Windows (32-bit and 64-bit): NT 4.0, XP
  - Unix (32-bit and 64-bit): Solaris, HP-UX, SGI IRIX
- Graphics Software: OpenGL
- Languages: English

*For up-to-date platform support information, please go to www.ptc.com/partners/hardware/current/support.htm

Optional DIVISION MockUp Add-On Modules

DIVISION Immersive Device Option
Interface with 3D peripherals and tracking devices such as head-mounted displays, wands, 3D mice, and gloves to enable a real-life understanding of designs.

DIVISION Style Clinic Option
Perform real-time styling studies in a virtual showroom. Evaluate surfaces using zebra striping reflections, and study surface aesthetics with light tube reflections and shadows.

DIVISION Motion Planning Option
View realistic simulations of product behaviors using event-based timing and triggers. Train operators on assembly/disassembly steps by defining and generating animation paths and sequences.

DIVISION Safe Work Manikin
Identify and analyze ergonomic aspects of the product design by capturing manikin behavior. Create your own manikins, manipulate postures, and analyze manikin interaction with the product, equipment and facilities.

Learn More
For more information about DIVISION Mockup and other PTC solutions, please visit www.ptc.com