

## Creo® Advanced Rendering Extension

CREATE PHOTOREALISTIC IMAGES—BEFORE BUILDING A PROTOTYPE

A picture is worth a thousand words. That's why companies invest significant time and money into building a physical prototype that can be photographed for use in marketing materials or consumer testing.

Creo Advanced Rendering Extension (ARX) allows you to produce photorealistic 3D product images for use in design reviews, marketing collateral, technical documentation, user manuals, and product packaging—without having to build a prototype. And, as your design concept changes and evolves, you can easily update your images without creating a new prototype, thus reducing costs significantly.

With Creo ARX, you can render images faster, with amazing realism. Simply select a specific material and apply photo-quality properties like a smooth, glossy finish or a rough, matte finish. You can represent the product's intended environment more realistically with Creo ARX than with any other application.

You now have the flexibility to create the perfect effect with the power to directly manipulate the lighting through 360° of rotation. You can also create a suitable environment for the product to be rendered in, for example, an outdoor scene or an office desktop. Additionally, you can apply special effects like textures, reflections, shadows and depth of field to enhance the final image. These advanced capabilities not only create images that impress consumers, but they also give you back time to optimize your design, and more budget to produce collateral that will generate both sales revenue and excitement around your product.



This image of a toaster in a kitchen environment demonstrates the power of Creo ARX, which brings products to life with realistic room settings, reflections and advanced lighting.

### Faster Design Reviews, More Impressive Documentation

With photorealistic images of the product in its actual environment, design reviews are much faster, and generate more enthusiasm. 3D-rendered images can also be used for consumer testing, and for tailoring the product and product launch to ensure success—at a significantly lower cost. High-quality images can also be used in technical publications, such as product documentation, white papers and user manuals.

Creo ARX will enable your product to break into the marketplace, not only with accurate promotional material, but with stunning visuals showcasing all aspects of the product.

## Key Benefits

- Improve communication via better product presentation and collateral for design, marketing, training, and customer-facing materials
- Increase time for creativity—decrease time waiting for rendering
- Achieve the highest degree of photorealism for designs
- Reduce product costs and increase efficiencies in detecting design issues, so changes can be made before costly prototypes are built

## Features and Specifications

### Advanced Lighting Capabilities

- Simulate a wide range of lighting, such as spotlight, skylight and distant light
- Enhance lighting with High Dynamic Range Image (HDRI) support
- Vary shadow softness of each light, for example, by simulating sunlight
- Enable light attenuation for real-world simulation of light fall off
- Vary the intensity of each light to take into account other lights in the scene
- Increase graphical realism by showing soft shadows of your product on the floor and reflections



In this image, designers used Creo ARX to realistically show decals on a cellular phone.



Creo ARX gives you powerful HDRI rendering capabilities that let you show procedural bump cast effects and 3D wood texture.

- Supports caustics, final gathering and global illumination
- Offers physical correct lighting with color temperature and wattage inputs

### Simulate a Wide Range of Materials

- Apply both image maps and procedural maps to a model
- Utilize bump maps to create relief and to represent material texture
- Use decal maps when applying an image on the surface, such as a company logo
- Determine the finish of the material—lacquer, satin or shiny
- Access a standard library of over 200 predefined material types
- Use dynamic texture placement to precisely map materials and finishes to surfaces

### Define the Product Environment

- Set the floor, wall and ceiling position, and apply the appearance scheme or use an HDRI image to generate the environment, lighting and/or background
- Snap the floor, walls or ceiling to the model
- Choose a cylindrical or rectangular room
- Use real-time rendering to view the room
- Reuse predefined settings across multiple models, such as lights, rooms and effects

### Special Effects

- Global Illumination
- Depth of field
- Region rendering
- Shadow control
- Color temperature
- Tone mapping

### Language Support

- English, German, French, Italian, Spanish, Japanese, Chinese (Simplified and Traditional) and Korean

### Platform Support and System Requirements

Visit the [PTC Support Page](#) for platform support and system requirements.

### To Learn More

For more information, visit: [PTC.com/products/creo](https://www.ptc.com/products/creo)

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