

# PTC Creo® Layout™

Swiftly Create 2D Conceptual Designs and Reuse Them as the Foundation for 3D Models

For up-front conceptual engineering designs, many companies use 2D CAD tools, which provide them with the right amount of speed and flexibility to make changes while exploring multiple design alternatives. As the design matures, however, the benefits of 3D solid modeling become more apparent. The company may ultimately want 3D solid models as their final design deliverables, but they still don't want to sacrifice the speed and flexibility offered by 2D CAD in the early concept phase.

When 2D CAD is the tool of choice for the up-front conceptual design, and 3D CAD is the tool of choice for the detailed design, transitioning between these two approaches becomes the primary challenge.

PTC Creo Layout solves this problem by providing a sophisticated 2D environment with all the tools the 2D designer needs to develop concept designs. It is built on top of the same technology as the rest of the PTC Creo family, so those 2D designs can be seamlessly reused as the basis for 3D models without the need to import or recreate data in 3D. In addition, the associativity between the 2D and 3D designs can be optionally preserved, ensuring that later changes to the 2D design are reflected automatically in 3D.

## Key Benefits

### Create and manage 2D geometry with unconstrained drafting capabilities

Use the software to create 2D conceptual designs with a broad selection of sketching and geometry manipulation tools. You can also add dimensions, notes, symbols, tables, and drawing formats – as well as organize your designs with structure, tags, and groups. Navigating large 2D designs is made easy with intuitive visualization tools.

### Reduce engineering time through 2D and 3D design reuse

Get started on a new 2D design faster by reusing existing designs as a starting point. You can import cross sections of 3D models from PTC Creo Parametric™, or import existing 2D data from a wide variety of standard 2D formats. You can also trace imported raster images to generate a sketch.

### Integrate 2D designs with 3D models

As a standalone app, PTC Creo Layout integrates with PTC Creo Parametric so you can use 2D designs generated in PTC Creo Layout to build 3D models in PTC Creo Parametric. Shorten design cycles by referencing some or all of a 2D design in 3D parts and assemblies.

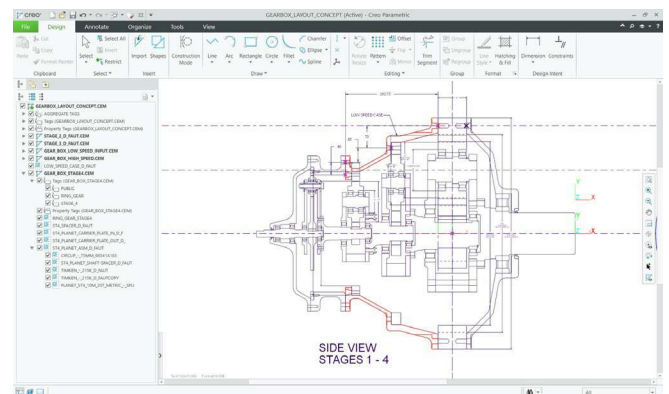
## Capabilities and specifications

### Concurrent layout design

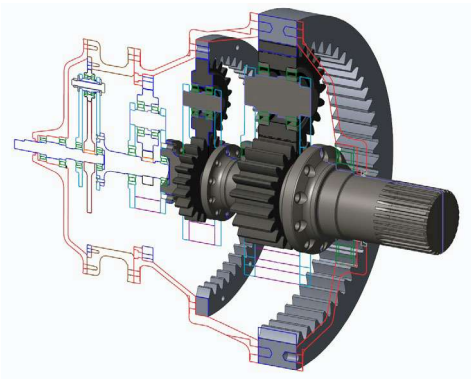
- Divide larger designs into smaller segments
- Work on a segment either independently or in context of the whole design

### 2D sketching

- Leverage a full suite of sketching and geometry manipulation tools including mirror, offset, and trim
- Place geometry precisely with sketching guides and precision panels
- Use construction geometry to capture 2D design intent



PTC Creo Layout provides sophisticated 2D drafting tools.



Directly reuse your 2D layout to create 3D models.

### Reuse existing 2D and 3D data

- Import formats such as DXF, DWG, DRW, IGES, and STEP
- Import cross sections of parts or assemblies from PTC Creo Parametric
- Import and trace raster images such as TIFF and JPEG
- Store and reuse data in the library palette

### Entity properties and organization

- Manage a design using structure nodes and groups
- Create and organize entities with property and custom tags for easy selection and editing
- Define public and private tags to control the data that is shared with 3D

### 2D detailing

- Use standard or custom drawing formats
- Annotate designs with dimensions, notes, and symbols
- Use tables to organize textual information about the design
- Create symbols with customizable symbol library

### 3D assembly integration with PTC Creo Parametric

- Directly assemble a 2D layout into a PTC Creo Parametric assembly
- Reference the assembled layout for component placement or visual reference

- Use layout specific data sharing feature to share data from the layout into 3D part models
- Make modifications to the 2D layout and have them automatically reflected in 3D
- Use update control capabilities to preview changes from the 2D layout before updating 3D models

### Language support

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

### Platform support and system requirements

Visit the PTC [support page](#) for the most up-to-date platform support and system requirements.

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

## The Creo Advantage

Creo is the 3D CAD solution that helps you accelerate product innovation to build better products faster. Easy-to-learn Creo uses a model-based approach to seamlessly take you from the earliest phases of product design to manufacturing and beyond. Combining powerful, proven functionality with new technologies including generative design, real-time simulation, advanced manufacturing, IIoT and augmented reality, Creo helps you iterate faster, reduce costs and improve product quality. Creo is also available as a SaaS product, providing innovative cloud-based tools for real-time collaboration and streamlined license management and deployment. The world of product development moves quickly, and only Creo delivers the transformative tools you need to build competitive advantage and gain market share.

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