



CREO CAPABILITIES FOR STARTUPS CREO 10



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CORE CREO CAPABILITIES

Augmented Reality Design Share Easily create, publish, and securely share Augmented Reality experiences managing models and viewer access

Assembly Design and Performance Management Easily create and manage complex assemblies using tools to manage and improve system performance

Design Animation Create detailed animations to visually illustrate product details and procedural product information

Design for Additive Manufacturing OOTB support for Stratasys and 3D Systems printers, supporting tools to enable model preparation, print validation, printer tray positioning, etc.

Design Reuse and Automation Rapidly create and reuse standardized components, features, and geometry (i.e., sketches)

Freestyle Design Rapidly manipulate primitive shapes to create high-quality freeform and stylized geometry to satisfy aesthetic, ergonomic and functional design requirements

Import Data Doctor Easily work with imported data using tools to repair, modify and featurize imported geometry that has missing information, geometry gaps and errors

Mechanism Design Model assemblies using true mechanism constraints to support and enable kinematic motion analysis, validate mechanism design and range of motion

Parametric Design Power to model any geometry regardless of shape, size, or complexity

Parametric Surfacing Create free-form and analytical surfaces using parameters, constraints, and calculations to capture design intent

Plastic Part Design Specialized functionality to speed the creation of plastic parts and "thin walled" parts (i.e., rib, draft)

Real-Time Rendering Use real-time rendering to visualize realistic products rendering real world conditions (i.e., materials, lights, reflections, shadows)

Sheetmetal Design Fast creation of accurate sheet metal parts and associated flat patterns (manufacturing)

Unite Technology Directly open and import common CAD formats, easily integrate, edit, and work with multi-CAD data from any CAD source

Weld Design Rapidly define and document weld geometry, fabrication and process requirements

2D Detailing (Drawings) Simplified creation and documentation of detailed manufacturing requirements

3D Annotations Define a single source of truth using 3D annotations to support model-based definition (MBD)



INTEGRAL APPLICATIONS AND EXTENSIONS

Additive Manufacturing Rapidly create and optimize lattice structures and define printer tray setup

Advanced Assembly Facilitate and support concurrent design and development using top-down design tools to capture design intent and manage the concurrent design process

Advanced Framework Speed design and improve the accuracy of structural framework assemblies

Advanced Simulation Advanced simulation capabilities to support nonlinear materials, large deformation, dynamic and prestress analysis, transient and non-linear thermal analysis

Ansys Simulation (powered by Ansys) High-fidelity and high-accuracy linear static structure, modal and thermal analysis of parts and assemblies powered by Ansys solver and meshing technology

Behavioral Modeling Rapidly optimize geometry solving for design goals and engineering criteria

Collaboration Extensions Easily integrate and work with data from CATIA V4/V5, SolidWorks, Siemens NX, and Inventor

Composite Design and Manufacturing Create solid geometry representing the composite shape, with accurate mass properties of the resulting geometry.

Computer-Aided Verification Digital inspection and verification of machined parts and assemblies using CMM and first article inspection

Design Exploration Rapidly explore, evaluate and review design alternatives using checkpoints to manage files and capture design history

Engineering Notebook powered by Mathcad Document design intent and use engineering calculations to support analysis driven design, verification and validation

EZ Tolerance Analysis (powered by Sigmatrix) Analyze and understand geometric tolerance stack-up and dimensional variation, and evaluate the impact of tolerances on the manufacturability of designs

Fatigue Analysis Analyze and optimize the structural integrity of parts and assemblies to cyclical loading conditions and real-world constraints to understand and predict cycle fatigue and product durability





Flexible Modeling Make fast, flexible edits to any 3D geometry in Creo Parametric

Flow Analysis (powered by Simerics) Analyze computational fluid dynamics (CFD) to understand and improve the functional performance and quality of products

Generative Topology Optimization (GTO) Rapidly generate the optimal design solving for functional objectives, constraints, loads and manufacturing process criteria

GD&T Advisor (powered by Sigmetrix) Wizard-like dashboard that simplifies and guides the user in the correct application of GD&T and improves MBD compliance with latest standards (ASME & ISO)

Human Factors Analysis Analyze human-workplace interactions to validate designs and demonstrate conformance of products with health, safety and workplace standards

Human Factors Design Visualize, simulate and optimize human-product interactions to support

human-centric design with safety, comfort and usability requirements

Intelligent Fastener Capabilities to automate fastener geometry creation and hardware assembly

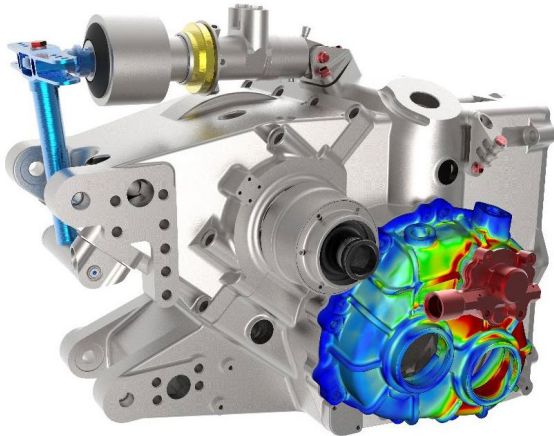
Interactive Surface Design Combine the power of parametric modeling and freeform surfacing to capture competitive differentiation and satisfy aesthetic, ergonomic and functional design requirements

Layout Maximize productivity using integral 2D layout and 3D detailed design

Legacy Data Migration Support legacy data migration and CAD consolidation efforts

Mechanism Design Analyze and optimize the dynamic performance of mechanism designs

Mold Analysis Analyze and optimize design geometry and mold conditions to avoid part defects and costly rework



Options Modeler Dedicated application for creating and validating 3D modular products

Performance Advisor Unprecedented visibility into your Creo-related hardware and software environment

Piping and Cabling Rapidly create and optimize the routing of 3D cable and piping systems

Product Insight Design for connectivity to capture relevant data streams and return real-world data

Render Studio (powered by Luxion) Create photorealistic images for design review, sales and marketing

Reverse Engineering Reverse engineer 3D CAD models from prototype scan data

Schematics Rapidly create 2D schematics and automate the routing of 3D cable and piping systems

Simulation Live Plus (powered by Ansys) Fast and easy static structural, thermal, modal, and fluid flow simulation providing real-time feedback to every engineer

Tool Design Accelerate the design of high-quality production mold and cast tooling



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.

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

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