

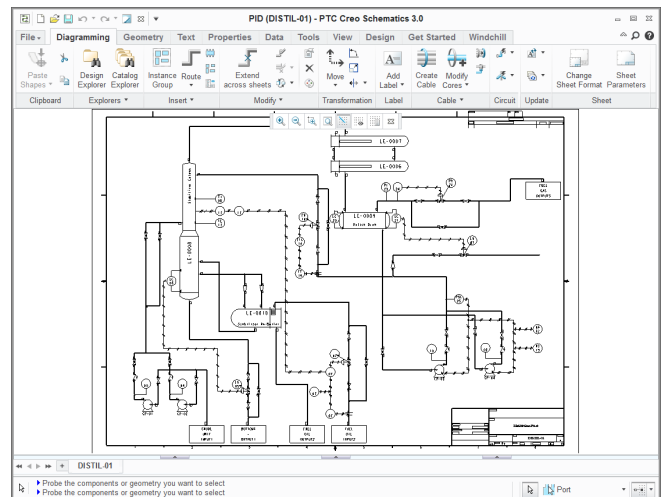
# Creo® Schematics™

DESIGN COMPLEX SYSTEMS WITH CONFIDENCE

To succeed in today's markets, companies need to introduce products faster than the competition, at lower cost, and with higher quality. Creo Schematics helps you achieve this goal by automating the cabling and piping systems detailed design processes – saving time, effort, and money.

When designing products that contain cabling or piping, it is absolutely essential to create high quality diagrams that document and plan the schematic requirements. The software contains the rich breadth of diagramming tools to satisfy the needs of many disciplines and industries, without forcing designers to compromise.

As part of the design process, mechanical designers route cables and pipes within their 3D assembly using schematic designs as maps. The software automates this step, extracting the schematic information and electronically driving the routed systems within any 3D MCAD system that accepts XML data. It is specifically optimized to utilize all the rich capabilities in cable and pipe routing within Creo. This compatibility not only speeds the 3D design by removing the tedious, manual process of interpreting 2D schematic diagrams, but it also virtually eliminates errors by ensuring adherence to the logic defined in the schematics.



Creo Schematics is a comprehensive 2D diagramming solution for multiple design disciplines.

## Key benefits

### Reduce time-to-market

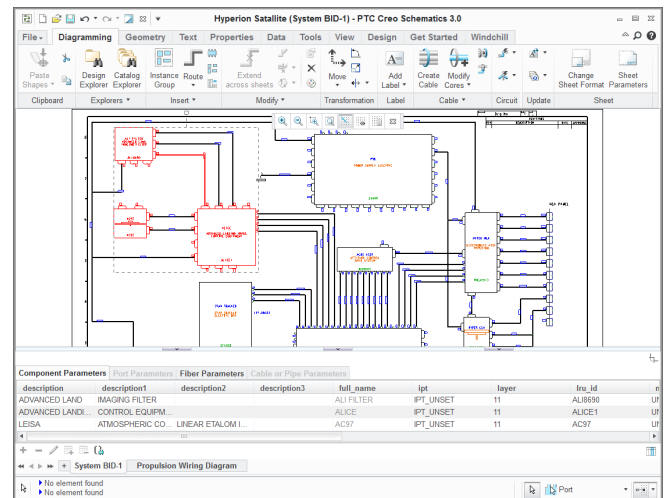
Creo Schematics provides the rich, multi-discipline tools design engineers need to create schematic designs quickly and easily. It then automates the routing of 3D cables and wires within Creo Parametric™ and Creo Elements/Direct®, and the routing of pipes within Creo Parametric. This eliminates the process of manually interpreting 2D schematics when creating a 3D digital prototype of harnesses and pipes.

## Reduce total product cost

PTC offers a more comprehensive routed systems solution, consisting of Creo Schematics, Creo Parametric, and the Creo Piping and Cabling Extension. This combination of tools enables the complete digital model to be defined, thus reducing the dependence on physical prototypes and significantly lowering product costs. Voltage margin analysis enables engineers to optimize the design for cost and weight, all within the same application. Indirect costs can be reduced as well. Since all diagramming tools are provided in a single solution rather than multiple solutions, users won't need to learn multiple software tools, further reducing training costs. Additionally, Creo Schematics reduces maintenance costs and downtime because there is only one solution to upgrade and learn.

## Improve product quality

Creo Schematics enables the digital design to be completely defined, and its information to be transferred directly into Creo Parametric or Creo Elements/Direct to drive the 3D design. This eliminates the error-prone interpretation of 2D schematics by the mechanical engineer. Creo Parametric and Creo Elements/Direct can automatically check the completed 3D routed assembly for exact compliance with the 2D schematics, saving the engineer hours of manual, tedious checking, and eliminating mistakes before production—thereby resulting in improved product quality and greater confidence. In addition, simulation capabilities in Creo Schematics allow designers to optimize the design for electrical reliability.



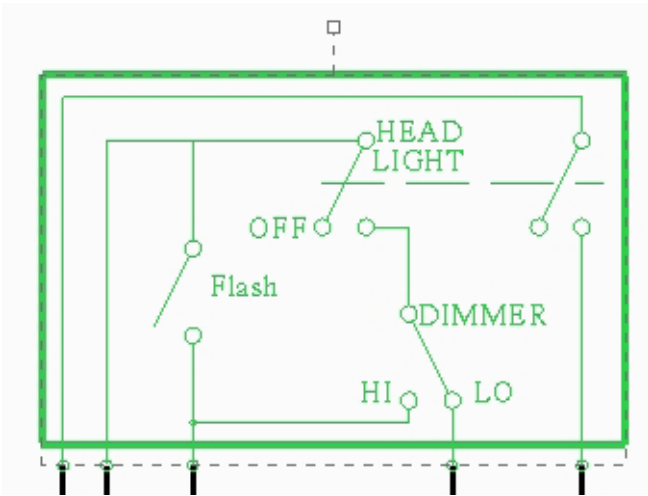
The software helps you create designs faster by enabling you to view and edit multiple objects.

## Improve information exchange

Creating a single, comprehensive digital model makes the rich product information available to all teams. The combination of Creo Schematics with the cabling and piping applications within Creo enables routed systems teams to completely define all aspects of the design in a rich digital model, without the need for interpretation or translation. Creo Schematics drives the 3D routing via XML, \*.ecad, and \*.con, which eliminates translation errors and automatically ensures compliance with the 2D schematic design.

## The right tools

Designers using Creo Schematic no longer need to rely on office tools that were never intended for schematic design. Nor do mechanical designers have to experience the frustration of interpreting 2D schematics, or manually checking the 3D routed systems for compliance. Creo Schematics, combined with the 3D piping and cabling applications in Creo, offers the 'no compromise' solution for the design of routed systems.



Relocate and rotate objects faster and more easily with drag handles in the software.

### Built on proven technology

A rich diagramming solution built on proven technology, the software combines the best functionality from PTC's proven incumbent diagramming solutions, leveraging experience from major aerospace and automotive customers. The result: rich diagramming technology and the connection to drive routed systems within 3D MCAD solutions.

### Features and specifications

#### Diagram types

- P&ID
- Block
- Wiring
- HVAC
- Functional
- Schematic
- Hydraulic
- Pneumatic

#### Data exchange

- Supported export formats: CSV, CGM, DWG, DXF, Medusa, PDF, XML, ECAD, and CON
- Supported import formats: EDS, CSV, CGM, DWG, DXF, Medusa, and XML
- Support for legacy Pro/DIAGRAM™ data

#### Design manipulation

- Windows® Explorer-style interface
- Context-sensitive, right mouse button pop-ups
- Define any user property
- Fast navigation through multiple sheets
- Update catalogs
- Merge design sheets

#### Integral product data management

- Enable management of schematic data within PTC's Product Development System (PDS), including Windchill® PDMLink® and Windchill ProjectLink™
- Access Windchill and open, check out, and check-in designs directly from within Creo Schematics

#### Flexible catalog management

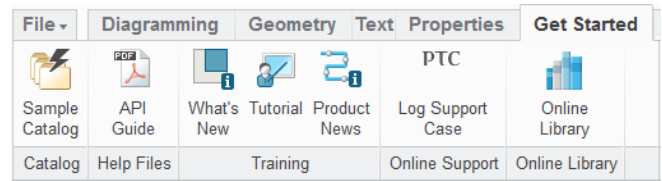
- Central catalog provides a single source for company design libraries
- Free symbol library includes ANSI, CSA, and IEEE standards

### Properties and parameters

- Parameters are fully user-definable and may be attached to: Folders, Sheet Sets, Sheets, Blocks, Fibers, Groups, Ports, Formats
- Parameters values may be defaulted in the catalog, modified upon instancing, updated by selection from a data set, edited from a multi-selection, or allocated automatically
- Graphical display of properties available on: Sheets, Formats, Blocks, Fibers, Groups, Ports
- Automated assignment of connector terminator information
- Import signal information from PCB applications

### Display characteristics

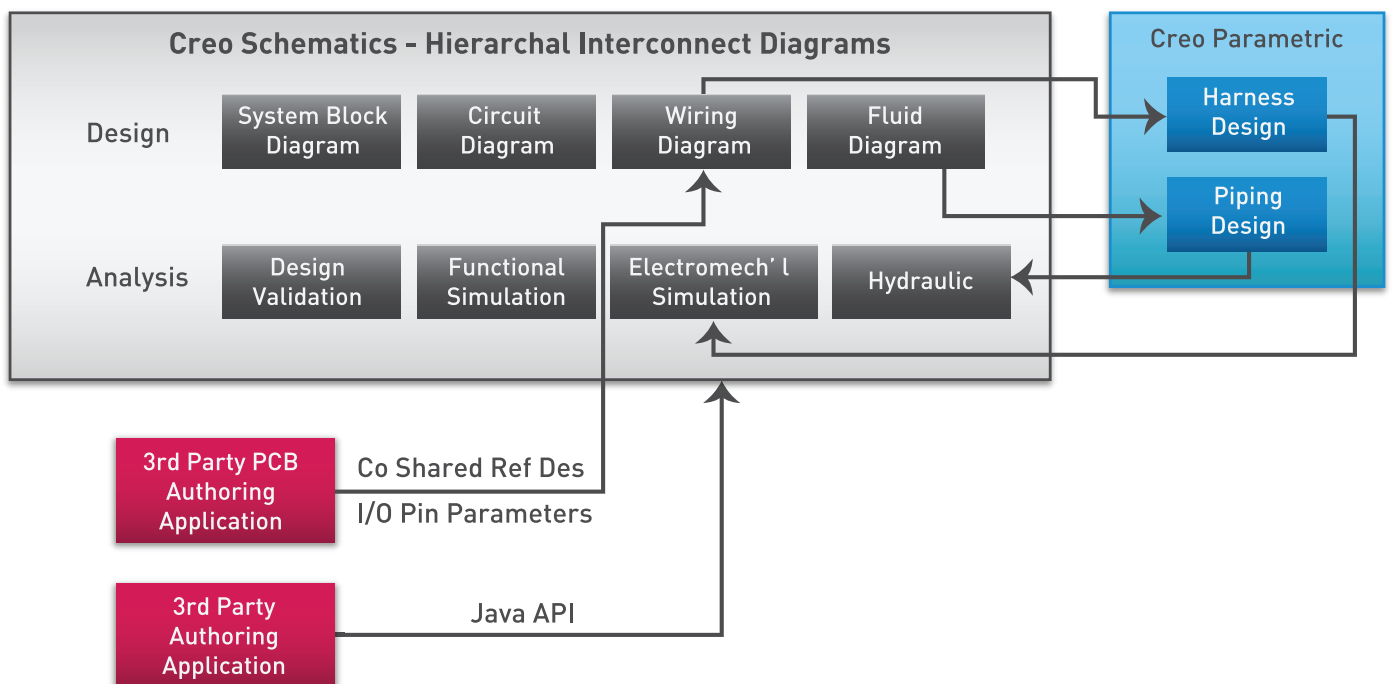
- Any number of attributes
- Any sub-string of any attribute value
- Any fixed strings, delimiters
- True Type font support
- Any layer, color
- Customizable labels



Get up to speed quickly with easy access to tutorials, online symbol catalogs, and quick links to PTC.com and support resources.

### Fast, configurable reporting

- Report types: Parameters, Inventory, Connection
- Reporting classes: Design, Catalogue, Block, Group, Fiber, Port
- Criteria:
  - Integer and real parameters
  - String parameters
  - List parameters
  - Sheet parameters
  - Type parameters
- Report destination: Sheet, Dialog Box, File
- Java Read API



## Electrical simulation

eSimulate Lite for analyzing various current and voltage properties between components (not available with Creo Schematics Lite\*)

\*Free download at [PTC.com/support](https://www.ptc.com/support)

## Tutorials

- Free tutorials are included to help new users get up to speed quickly with Creo Schematics
- Free electrical simulation tutorials for new users of eSimulate Lite

## Language support

- English, German, French, Russian, Japanese, and Simplified Chinese

## Platform support and system requirements

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

For more information, visit: [PTC.com/product/creo](https://www.ptc.com/product/creo) or contact your local sales representative.

© 2016, PTC Inc. (PTC). All rights reserved. Information described herein is furnished for informational use only, is subject to change without notice, and should not be taken as a guarantee, commitment, condition or offer by PTC. PTC, the PTC logo, Product & Service Advantage, Creo, Elements/Direct, Windchill, Mathcad and all other PTC product names and logos are trademarks or registered trademarks of PTC and/or its subsidiaries in the United States and other countries. All other product or company names are property of their respective owners. The timing of any product release, including any features or functionality, is subject to change at PTC's discretion.

J7739-CreoSchematics-EN-0816