

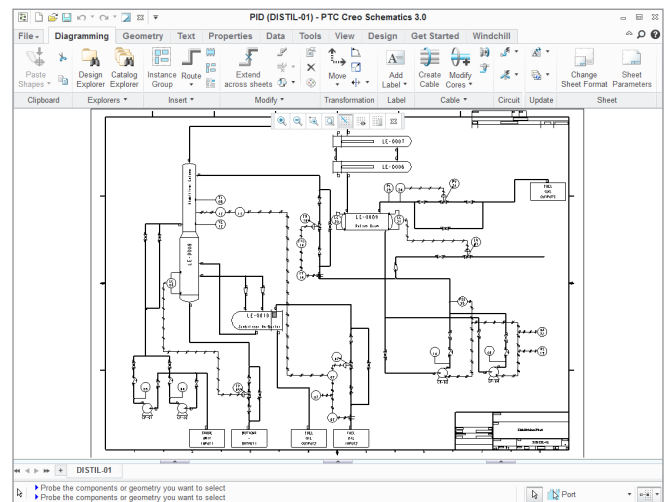
PTC® Creo® Schematics™

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. PTC 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 PTC 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.



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

Key benefits

Reduce time-to-market

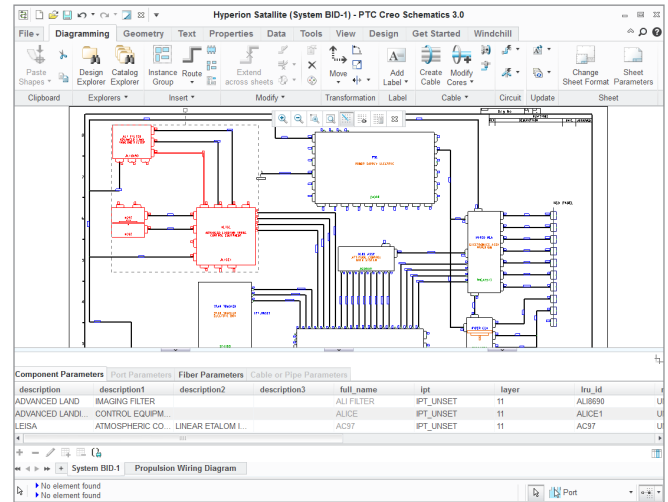
PTC Creo Schematics provides the rich, multi-discipline tools design engineers need to create schematic designs quickly and easily. It then automates the routing of 3D cables and wires within PTC Creo Parametric™ and PTC Creo Elements/Direct®, and the routing of pipes within PTC Creo Parametric. This 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 PTC Creo Schematics, PTC Creo Parametric, and the PTC 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, PTC Creo Schematics reduces maintenance costs and downtime because there is only one solution to upgrade and learn.

Improve product quality

PTC Creo Schematics enables the digital design to be completely defined, and its information to be transferred directly into PTC Creo Parametric or PTC Creo Elements/Direct to drive the 3D design. This eliminates the error-prone interpretation of 2D schematics by the mechanical engineer. PTC Creo Parametric and PTC 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 PTC Creo Schematics allow designers to optimize the design for electrical reliability.



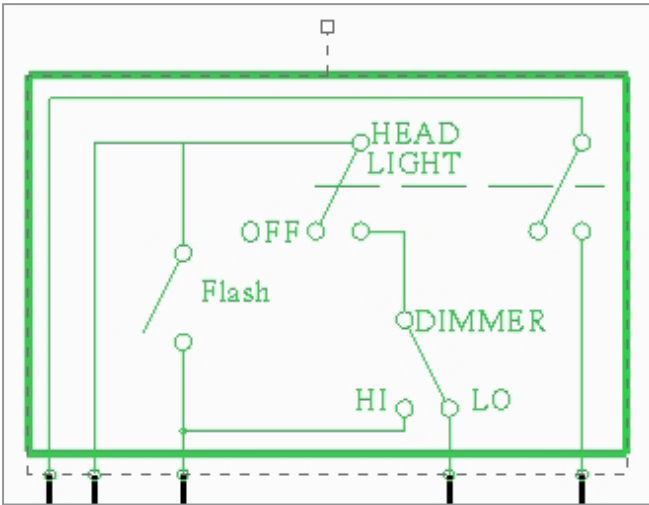
The software helps you create designs faster by enabling you to view and edit multiple objects.

Improve information exchange

Creating a single, comprehensive digital model makes the rich product information available to all teams. The combination of PTC Creo Schematics with the cabling and piping applications within PTC 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. PTC 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 PTC 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. PTC Creo Schematics, combined with the 3D piping and cabling applications in PTC 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: CSV, CGM, DWG, DXF, Medusa, and XML
- Support for legacy PTC 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 PTC Windchill® PDMLink® and PTC Windchill ProjectLink™
- Access PTC Windchill and open, check out, and check-in designs directly from within PTC Creo Schematics

Flexible catalog management

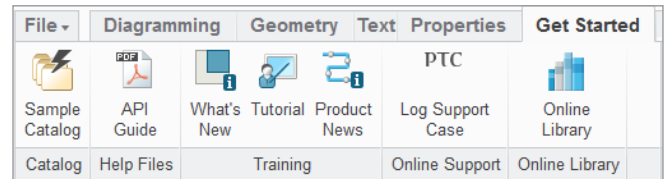
- Central catalog provides a single source for company design libraries
- Free symbol library includes ANSI, CSA, and IEEE standards

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

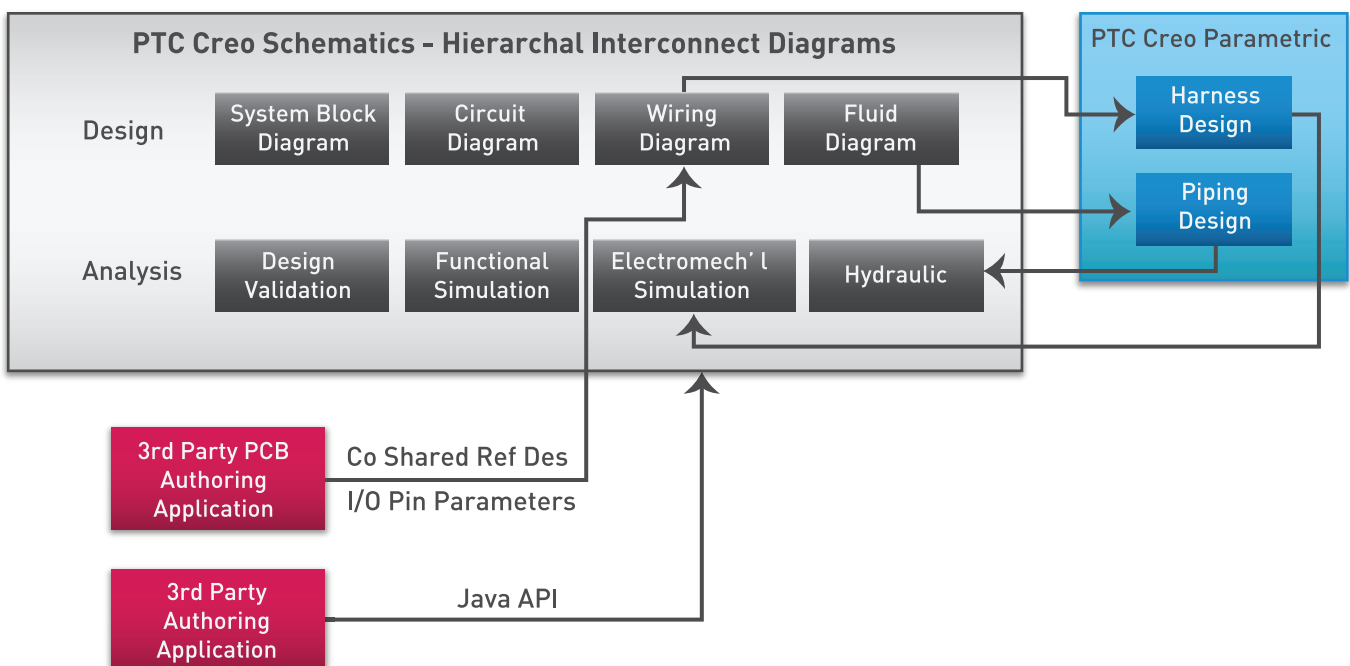
- Any number of attributes
- Any sub-string of any attribute value
- Any fixed strings, delimiters
- True Type font support
- Any layer, color
- Customizable labels



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 PTC 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 PTC 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

Supports Microsoft Windows®

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

For more information, visit:

[PTC.com/product/creo/schematics](https://www.ptc.com/product/creo/schematics)

For more information on PTC Creo 3D routing capabilities, please visit the [PTC Creo Piping and Cabling Extension Data Sheet](#) and [PTC Creo Elements/Direct Cabling](#)

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