

# PTC Creo® Routed Systems Design + Windchill PLM

## Integrated Solution for Wiring and Cabling



## Eliminate Wiring & Cabling Chaos with PTC Creo Routed Systems Design + Windchill PLM

### The Challenge: Wiring Documentation That Can't Keep Up

Many organizations still rely on a patchwork of spreadsheets, diagramming tools, and disconnected documents to define wiring and cabling. That “hodge-podge” may work at small scale—but as products grow more complex, the approach breaks down: inconsistent revisions, manual updates, slow change cycles, and costly errors that surface late in manufacturing or in the field.

### The Solution: A Unified Digital Thread for Routed Systems

**PTC Creo Routed Systems Design (RSD)**—integrated with **Windchill PLM**—creates a connected workflow that takes you from logical design intent to validated physical routing and manufacturing-ready documentation, all under lifecycle control.

PTC describes Routed Systems Design as a suite of tools to **automate, design, and analyze piping, cabling, and harness projects** from conceptual design through

manufacturing, helping improve cost, quality, and time-to-market. Windchill provides the enterprise foundation for secure collaboration and traceable product data, supporting a product-driven digital thread.

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## What You Get with Creo Routed Systems Design

### 1) Intelligent 2D Schematics → Logical Connectivity

With **Creo Schematics**, teams can rapidly create 2D schematics and capture the logical data needed for downstream automation.

### 2) Automated 3D Routing for Cabling & Harnesses

Using the **Piping & Cabling Extension (PCX)**, teams can automate 3D cable routing and modify routes derived from 2D schematic logic.

### 3) Manufacturing Documentation You Can Trust

With the **Harness Manufacturing Extension (HMX)**, complicated harnesses can be flattened into practical manufacturing documents—supported by associativity so updates propagate when designs change.

PTC highlights that associativity across the Routed Systems toolchain helps ensure that changes are reflected in manufacturing outputs, reducing errors and manual rework.

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## Why Windchill PLM Matters

Design tools alone don't solve governance. **Windchill PLM** helps ensure the right people access the right data at the right time—securely and traceably—across engineering, manufacturing, and the extended enterprise. Windchill is positioned to deliver secure collaboration, scalable data management, and digital-thread readiness with open architecture integration.

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## Key Benefits (Customer Outcomes)

### ✔ Reduce Rework and Late-Stage Surprises

Routed Systems Design is positioned to reduce errors, late-stage redesign, rework, and scrap by minimizing reliance on manual routings and physical prototypes.

### ✔ Improve Quality with Validation and Associativity

PTC emphasizes eliminating error-prone interpretation of 2D schematics and validating 3D routings—helping improve overall product quality.

✔ **Accelerate Time-to-Market**

Automation and associative updates shorten design cycles and reduce the time spent manually updating downstream documentation.

✔ **Establish a Controlled, Traceable Release Process**

Windchill provides the controlled system of record for product data and collaboration—supporting traceability and a product-driven digital thread across teams.

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**A Better Way to Work (Before vs. After)**

**Before:** disconnected spreadsheets + drawings + documents → manual updates → version confusion

**After:** integrated schematics + 3D routing + automated manufacturing outputs → governed releases in Windchill

Routed Systems Design’s connected toolset and Windchill’s enterprise governance together create a practical path away from wiring documentation chaos.

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**Call to Action**

**Ready to modernize wiring and cabling?**

We can help you assess your current documentation workflow, identify the highest-impact pilot, and build a roadmap to an integrated digital thread using **Creo Routed Systems Design + Windchill PLM**.