CADRA for SolidWorks (CADRAWorks)

Bi-directional data exchange to and from SolidWorks

Import 3D Solid models for highly accurate drawings and documentation.
Export concept designs for photorealistic 3D visualization

2-1/2D drafting with full 3D wireframe that is simple, accurate, well-connected, robust, cost-effective.

CADRA for SolidWorks tightly couples CADRA Design Drafting with the SolidWorks solid modeler. This combination gives you extraordinary productive and cost effective concept design exploration to required detailed engineering drawings. It also provides 2-1/2D drafters better visualization of the design intent and assembly.

**SolidWorks users see high Productivity Gains**
Importing SolidWorks models provides Designers, drafters, and engineers the advantage of a variety of “one-touch” Quick* tools in CADRA that allow them to accomplish in a single step what in most other CAD tools takes multiple steps.

**Why Choose CADRA for SolidWorks?**
- Improve Design and Documentation quality
- Avoid costly mistakes by bringing in your data directly from SolidWorks or directly to SolidWorks from your CADRA 2.5 D files
- No need redraw all your CADRA drawings into SolidWorks simply generate a SolidWorks sketch from your existing CADRA drawings
- Bi-Directional between CADRA and SolidWorks makes drawing and editing parts and assemblies very easy

**Features**

- **CADRA Drafting Engine**
  - 2-1/2D view-based drafting
  - Full 3D wireframe support
- **Benefits for SolidWorks users**
  - Detail solid models quickly
  - Import more data, more easily
- **Benefits for CADRA users**
  - Add 3D solid modeling to 2-1/2D
  - Photo-realistic visualization of design intent
- **CADRA Productivity**
  - QuickDim intelligent dimensioning
  - QuickPick rapid selection and insertion of parts, layers, & overlays
  - QuickHatch for crosshatching
  - QuickTrim for trimming & cornering
  - FlexDesign adds dimension-driven variation and design capabilities
  - Planar, step and complex sectioning with cross-hatch control
  - Preview of geometry to be created
  - In-place figure editing
  - In-drawing foreign language text
  - Plot preview, Plots PDFs
  - Bi-directional HPGL format
  - Microsoft Office integration (OLE)
  - In Drawing Documentation Tools
- **Design Automation**
  - Macro programming language
  - Visual Basic Object model interface
  - CADRALib commonly used parts
  - CDRABOM bill of materials automation
  - CADRAEDM data management facility
  - Read and/or write to CADAM, CADDS, DWG, DXF, IGES, PDF, HPGL, MICROCADAM, CATIA, and CCD

https://www.mentor.com/products/mechanical/cadra
**CADRA at a glance**

![CADRA Diagram]

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**Improve Design and Documentation Quality**
The CADRA-LIB features allow time to explore alternatives and focus on clarity and accuracy of the imported 2-1/2D models for increased drafting and documentation quality.

**Reduced Cost, Faster Time to Market**
When using CADRA you immediately turn a cost savings and compress the release schedule. No need to redraw drawings with CADRA-LIB.

**Low Cost of Ownership**
The efficient drawing productivity brought to your desktop by CADRA, allows exploration time for iterations, innovations, and clarity, which leads to improved product quality and faster time to market. CADRA provides an overall cost effective ownership experience, with its links into other CAD tools and availability on fresh Hardware and Operating Systems.

**Fits Existing Infrastructure**
CADRA runs on 64 bit versions of Windows 8.1 and 10 Professional and Enterprise. As well as Windows servers versions 2012 R2, 2016 and 2019. Microsoft Word documents, Excel spreadsheets, PowerPoint presentations and pictures can be embedded in CADRA drawings. Legacy data or data from other CAD programs can be imported as well using OLE (Object Linking and Embedding).

**Global Solution**
CADRA is available in multiple languages including English, French, German, Italian and Japanese. Reduction in the learning curve and data migration times are obtained through training, database conversions, programming tools, viewers, and direct interfaces with other CAD tools, as well as quick links to 3D visualization.

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**Greater Productivity with CADRA**

- **CADRA Raster** — Raster-to-vector conversion utility for converting paper drawings into CADRA files
- **CADRADirect** — A suite of CADRA translators that allow write/read of CADRA drawings
- **CADRAView/Check** — Share designs as view-only, markup, and red-line
- **CADRA Solid Modeling Integrators**: The SolidWorks and SpaceClaim integrators have bidirectional data exchange that turns solid models into accurate CADRA designs and legacy CADRA files into Solid Model sketches with ease. This can be used for documentation or cost effective 2-1/2D designs and provides photo-realistic images of CADRA designs in progress for prototyping
- **CADRANC** — 2- through 5-axis numerical control (NC) programming with full mill turn support and control of a diverse mix of CNC machines
- **CADRA Plot** — Batch plot management and file translation
- **CADRA-BOM** — Automate bill of materials (BOM) creation, reuse setup and retrieve
- **CADRA-EDM** — Data management facility
- **CADRA-LIB** — Library of components created with CADRA productivity features in mind

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