

# CIRCUITWORKS

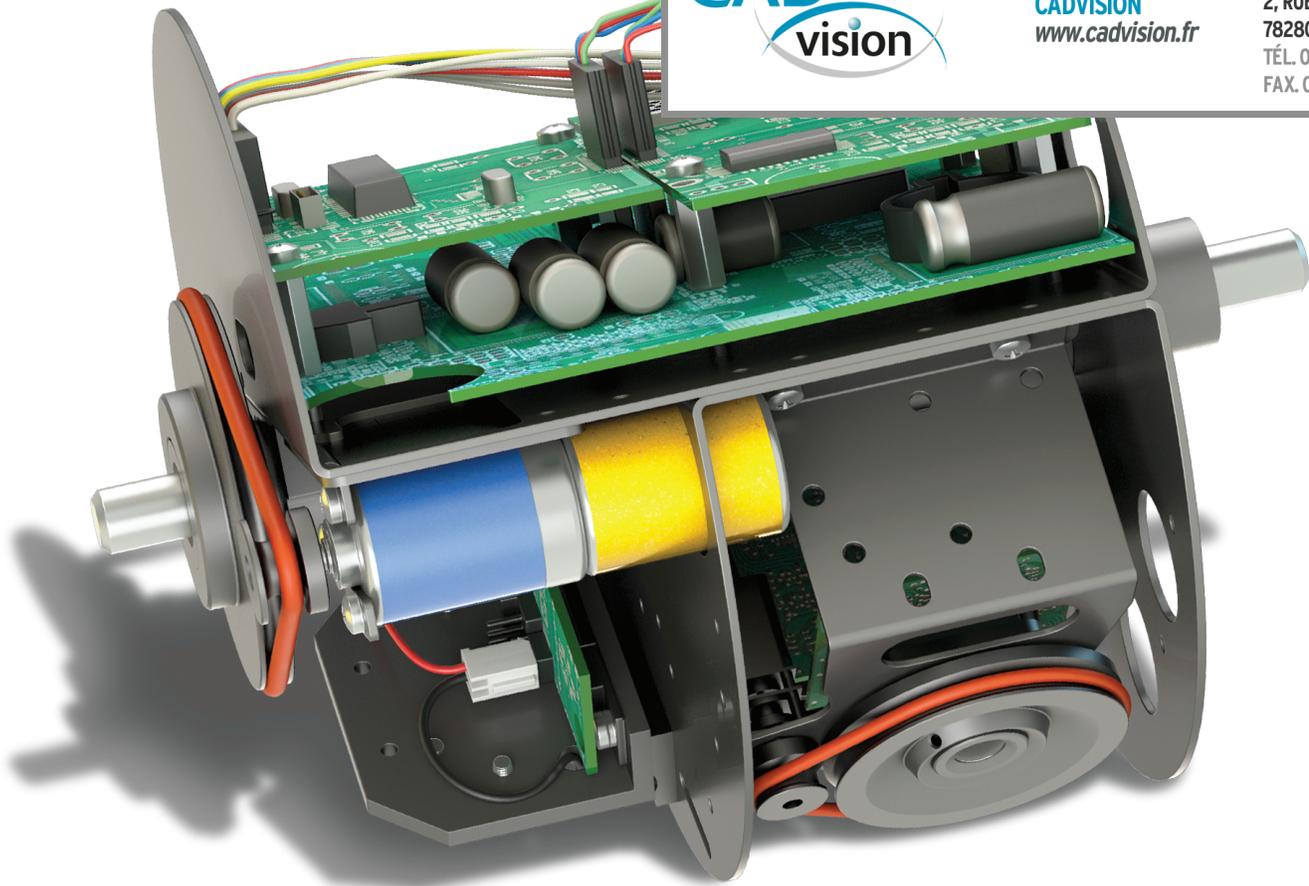
## ELECTRICAL CAD TO MECHANICAL CAD BIDIRECTIONAL EXCHANGE



### **INTERGRATED ECAD TO MCAD TRANSLATOR**

CircuitWorks™ is a powerful electronic CAD/ECAD translator that enables engineers to create accurate 3D models of circuit boards in SOLIDWORKS® 3D design software. Using CircuitWorks, electrical and mechanical design teams can deliver highly detailed models with automatic synchronization between electrical CAD (ECAD) and mechanical CAD (MCAD), giving your company a competitive edge.

As part of the SOLIDWORKS Electrical 3D technologies, CircuitWorks enables you to share, compare, update, and track electrical design data to help you more quickly resolve electrical-mechanical integration problems. Mechanical and Electrical Engineers can work closely in creating complex designs, helping to speed up the product development process, save time and development costs, and accelerate time-to-market.



## ELECTRICAL CAD TO MECHANICAL CAD EXCHANGE

Efficiently collaborating on CAD data is one of the prevalent challenges for mechanical and electrical designers. When developing a consumer product such as a laptop, where reducing size and weight while preserving aesthetics are all important criteria, the Electrical Engineer designing the printed circuit board (PCB) and selecting components (such as fans and power supplies) must clearly communicate ECAD data to the Mechanical Engineer. In turn, the Mechanical Engineer needs to clearly communicate back mechanical design changes affecting the design of the PCB.

CircuitWorks efficiently promotes bidirectional data exchange. Design teams can work together to resolve ECAD-MCAD integration problems and move faster to create innovative, higher quality products. Designs can start with the mechanical aspects of PCB design and then move to Electrical Engineers to create the electronic design. The overall design can then be passed back to the Mechanical Engineers. This process repeats continuously during the product design and development process.

CircuitWorks provides for a common library of 3D electrical components to help ensure all designers adhere to company and industry standards. For SOLIDWORKS customers who utilize SOLIDWORKS Enterprise Product Data Management (EPDM), CircuitWorks component libraries can be fully managed and controlled.

CircuitWorks provides the ability to bring ECAD designs (PCB) into electrical 3D models for use with SOLIDWORKS Electrical Schematic and SOLIDWORKS Electrical 3D™ tools for system level electrical and harness design.

As part of SOLIDWORKS Electrical 3D technology, CircuitWorks allows you to merge thermal properties data from the electrical components into the 3D CAD models, providing an easy conduit to perform downstream analysis and design. Design validation such as electronic cooling analysis from SOLIDWORKS Simulation is easily achieved from data that was merged with the 3D CAD models from CircuitWorks.

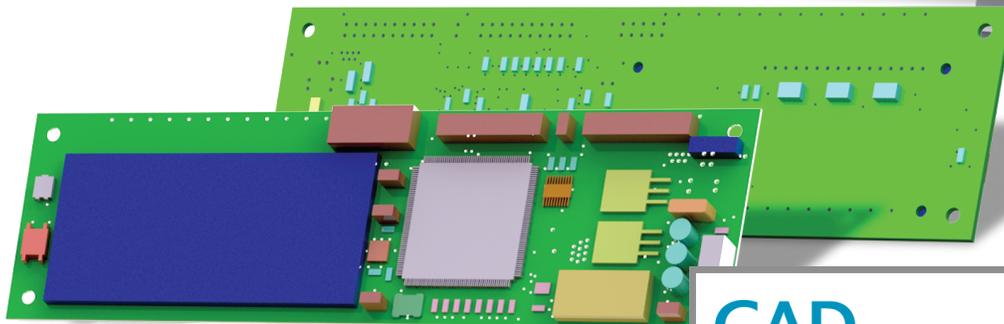
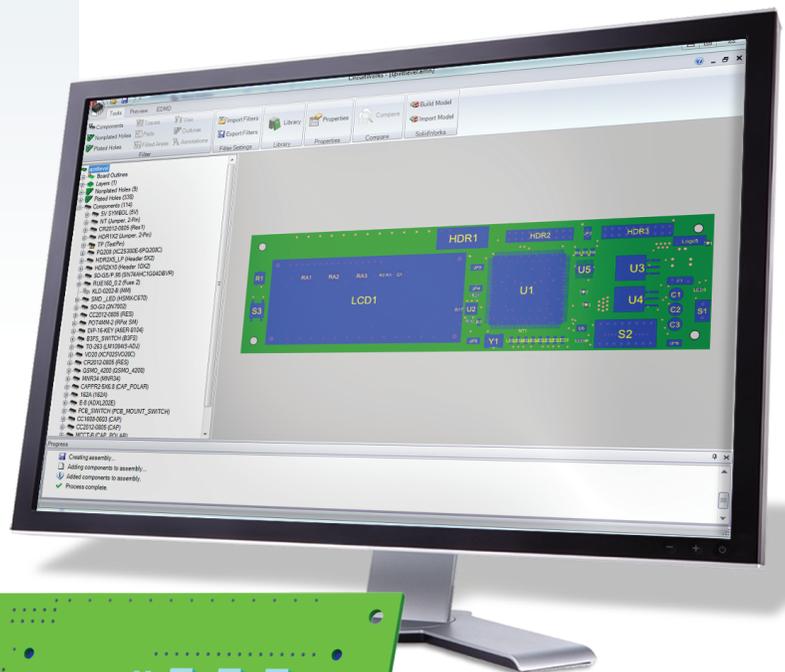
### Key functionality includes the ability to:

- Integrate ECAD data with CircuitWorks using IDF, ProStep™ (IDX), or PADS (\*.asc) formats
- Create PCB outlines, keep-out/keep-in areas, locations of major components, and maximum heights—then pass the design to electronics designers
- Filter out holes, plated holes, slots, and vias to understand board mounting and interconnection and the mechanical aspects of the design
- Import detailed electronic designs from ECAD, review the design, then build the PCB assembly with SOLIDWORKS software
- Compare different boards and board revisions to fully understand differences
- Include design change notes as data passes between electrical and mechanical team members
- Track changes as versions of the design are exchanged between ECAD and MCAD
- Integrate ECAD design data into the 3D models for use with SOLIDWORKS Electrical and SOLIDWORKS Simulation products
- Maintain and control CircuitWorks libraries with SOLIDWORKS EPDM

## Support

CircuitWorks supports common IDF 2.0, IDF 3.0, IDF 4.0, and PADS (\*.asc) file formats. IDF is a standard interchange format that can be written and read by a large number of popular ECAD systems including:

- Altium® Designer® and P-CAD® PCB
- Cadence® Allegro® and OrCAD® Layout
- CIM-Team GmbH CADES-G
- I.B. Friedrich Target 3001!
- Intercept Pantheon®
- Mentor Graphics® Board Station® and Expedition® PCB
- Mentor Graphics Supermax ECAD® and PADS® Power PCB
- Number One Systems™ Easy-PC™
- Tsien BoardMaker
- Valor Trilogy 5000™ and Enterprise 3000™
- Visionics™ EDWinXP™
- WestDev Pulsonix™
- Zuken CADSTAR, CR-5000
- Zuken Theda Autoboard
- Yokogawa CADvance™



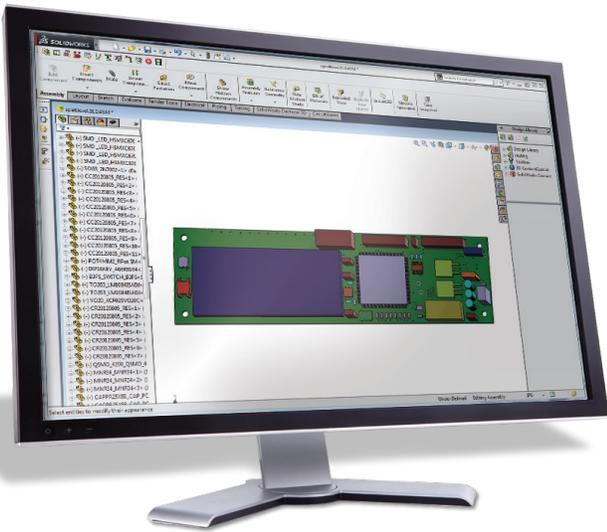
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## SOLIDWORKS PRODUCT DEVELOPMENT SOLUTION

SOLIDWORKS software provides users with an intuitive 3D development environment that helps maximize the productivity of your design and engineering resources to create products better, faster, and more cost-effectively. See the full range of SOLIDWORKS software for design, simulation, technical communication, and data management at [www.solidworks.com/products2015](http://www.solidworks.com/products2015).



## SYSTEM REQUIREMENTS

- Windows® 7 (64-bit) or Windows 8 (64-bit)
- 2 GB RAM (minimum)
- 5 GB disk space free (minimum)
- Certified video card and driver
- Intel® or AMD® processor
- DVD or broadband Internet connection
- Internet Explorer™ 8 or later

For additional details, visit [www.solidworks.com/systemrequirements](http://www.solidworks.com/systemrequirements).

## LEARN MORE

To learn more about SOLIDWORKS Electrical offerings, visit [www.solidworks.com/electrical](http://www.solidworks.com/electrical) or contact your local authorized SOLIDWORKS reseller.

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## FAITES CONFIANCE A CADVISION REVENDEUR DE LOGICIELS DE CAO

### 1ER REVENDEUR D'IMPRIMANTES 3D EN FRANCE ET EXPERT EN SOLUTIONS DE CAO

#### Esprit de service

*Réactivité au quotidien, et adaptabilité aux besoins de nos clients sont la meilleure expression de notre esprit de service.  
Support technique de nos clients au travers d'une maintenance de proximité et de qualité.  
Services : Formations, Assistance sur site et consulting.*

#### Qui Sommes-Nous

*Filliale du groupe d'ingénierie français ING'EUROP, CADvision assure la commercialisation, la mise en place, les services de formation et le suivi technique sur l'ensemble de la gamme Stratasys.*

*Leader français sur le marché des imprimantes 3D professionnelles, nous revendons également des solutions de CAO 3D.*

Quelques références clients :

AFM - AGCO - AIRBUS - ALCATEL-LUCENT - ALDEBARAN ROBOTICS - ALSTOM - AMESYS - ARCELOR MITTAL - ARVINMERITOR - ASTRIUM - ATMEL - AXEL - BAYER - BODET - BRUKER BIOSPIN - BWI - CANON - CASSIDIAN - CCG VERITAS - CEA - CHUBB SECURITE - CNES - CNRS - COBHAM - CONTINENTAL - COTY PRESTIGE BEAUTY - CYBERNETIX - DANONE - DCNS - DECATHLON - DELPHI - EADS - ESSILOR - E-SWIN - FAGORBRANDT - FIVES - FAURECIA - GE HEALTHCARE - GECINA - GILSON - GROUPE SEB - GROUPE CARAVELLE - HORIBA - HUTCHINSON - IFP - IFREMER - IMAJE MARKEM - INEO - INTERTECHNIQUE - ITER - ITW - JAEGER - JDSU - JOHNSON CONTROLS - KBS - KEOPSY - LEGRAND - LES IUT - LES LYCEES TECHNIQUES - LES ECOLES D'INGENIEURS - LISI - LORIENCE - L'OREAL - MAIF - MAPED - MIKLI - MILLIPORE - MINISTERES - MITSUBISHI ELECTRIC - NAGRACARD - NESTLE - NEWELL - NEXTER - OLDHAM - ONERA - ORANGE LABS - PARKEON - PARROT - PHILIPS FRANCE - PITNEY BOWES - PSA PEUGEOT CITROEN - QINETIQ - QUALIFORM - QUALIPAC - QUANTHOUSE - RATP - REFLEX CONSULTING - RENAULT - RENAULT SPORT F1 - ROCKWELL COLLINS - RTE-EDF - SAGEM-SAFRAN - SAINT GOBAIN - SALOMON - SANOFI AVENTIS - SCHLUMBERGER - SCHNEIDER ELECTRIC - SEALYNX - SIEMENS - SNCF - SNECMA - STMICROELECTRONICS - TECHNICOLOR - THALES - TRELLEBORG - TRW CARS FRANCE - TYCO - UNIFIRST - UNIVERSITES FRANCAISES - VALEO - WINLIGHT SYSTEMS - XIRING - YAMAHA - ZODIAC



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