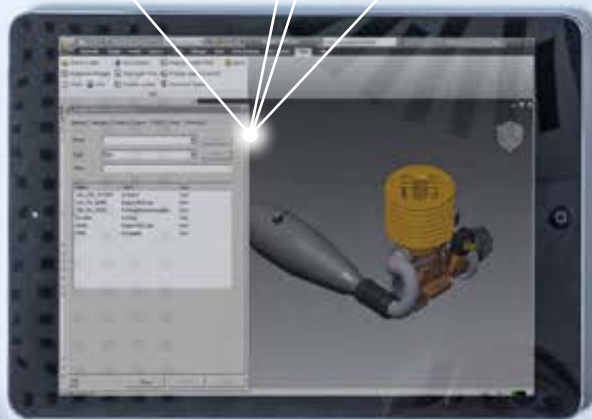


XPLM
Expert Integration

**CONNECT
FLEXIBILITY AND
DATA QUALITY.**

With the widest ECAD and MCAD integration
portfolio for Aras Innovator.



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Integrate your ECAD design development process

With the centralized management of native design data and the generation of BOMs, fabrication and assembly data



THE CHALLENGES

The needs for consistent information flows and processes, and to be able to launch innovative and high-quality products, are just some of the challenges companies face when trying to manage the efficient collaboration of design teams across various locations. With the new challenges created for businesses by 'digital transformation' and the prevalence of Industry 4.0 and IoT, firms are increasingly searching for a solution to facilitate cross-disciplinary cooperation in their production of complex products.

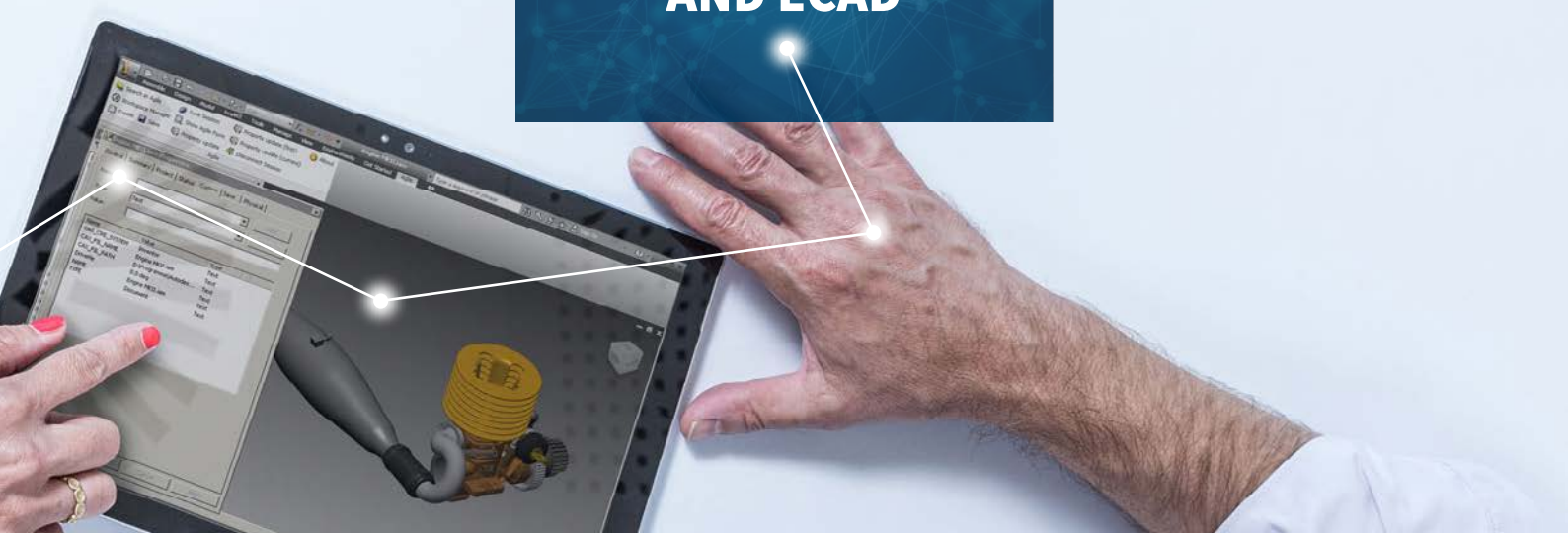
THE SOLUTION

Developed by XPLM, integrate2 enables an integrated approach to connect your ECAD design workflow to the complete product design ecosystem. This allows cross-discipline collaboration across design teams and combines mechanical, electrical, embedded software, and electronic design data on a single platform.

Using integrate2 enables ECAD design data to be managed more consistently, improving efficiency, agility and process reliability and gives engineers a complete view of their product data. Designers can now access, publish and synchronize information without leaving their familiar ECAD design environment. The integrated approach moreover enhances the ability to hit release dates, cost targets and product quality and feature set goals.

KEY BENEFITS

- Save time and eliminate errors through consistency in automated data exchange processes and data model
- Avoid redundancy by using a single integrated platform
- Achieve holistic traceability of your product development processes by incorporating ECAD design data into the business processes
- Make design information accessible to users outside the ECAD world
- Enhance collaboration through simplified multi-site data exchange
- Prevent duplicate data entry in ECAD library and PLM
- Adapt the integration functionalities to your operational processes. Shorten your search times to access design data more quickly
- Avoid manual processes



INTEGRATE² THE EFFICIENT INTEGRATION BETWEEN ARAS INNOVATOR AND ECAD

MAIN FEATURES

integrate2 manages native ECAD design data and the generated manufacturing data inside PLM by using standardized functionalities:

- Starting new projects with centralized managed templates
- Complete release of projects including automatic creation of fabrication and documentation outputs into PLM
- Automatic population of parameters in drawing frames
- Generation of Bill of Materials including design variants
- Comparison of Bill of Materials during save of the design project
- Check-In and Check-Out capabilities
- Bi-directional synchronization of library content
- Extensive search capabilities
- Easy linking of data to other PLM objects
- Solid audit trail via status log

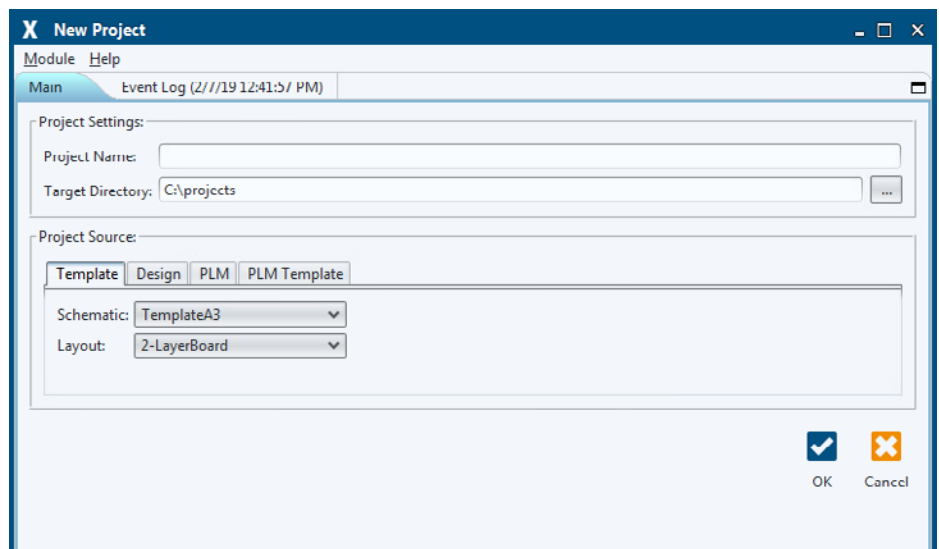
AVAILABLE INTEGRATIONS

ECAD ELECTRIC	ECAD ELECTRONIC	ECAD EDM
AutoCAD Electrical	Altium Designer	Altium Concord Pro
ELCAD	Cadence Allegro	Altium NEXUS
Engineering Base	Cadence OrCAD	Cadence Allegro EDM
EPLAN	Mentor PADS	Cadence OrCAD EDM
Mentor Capital	Mentor Xpedition	Mentor EDM
SOLIDWORKS Electrical	Pulsonix	

NEW PROJECT

This module is used to create new designs based on templates or existing designs

- Create new designs based on schematic and PCB templates or reuse existing designs stored in the file system or in PLM.
- Automatically update pre-defined attributes in the new design.
- The integration creates a local copy of the design for editing.



SAVE TO PLM

This module is used to manage ECAD engineering information in PLM.

FEATURES: INNOVATION

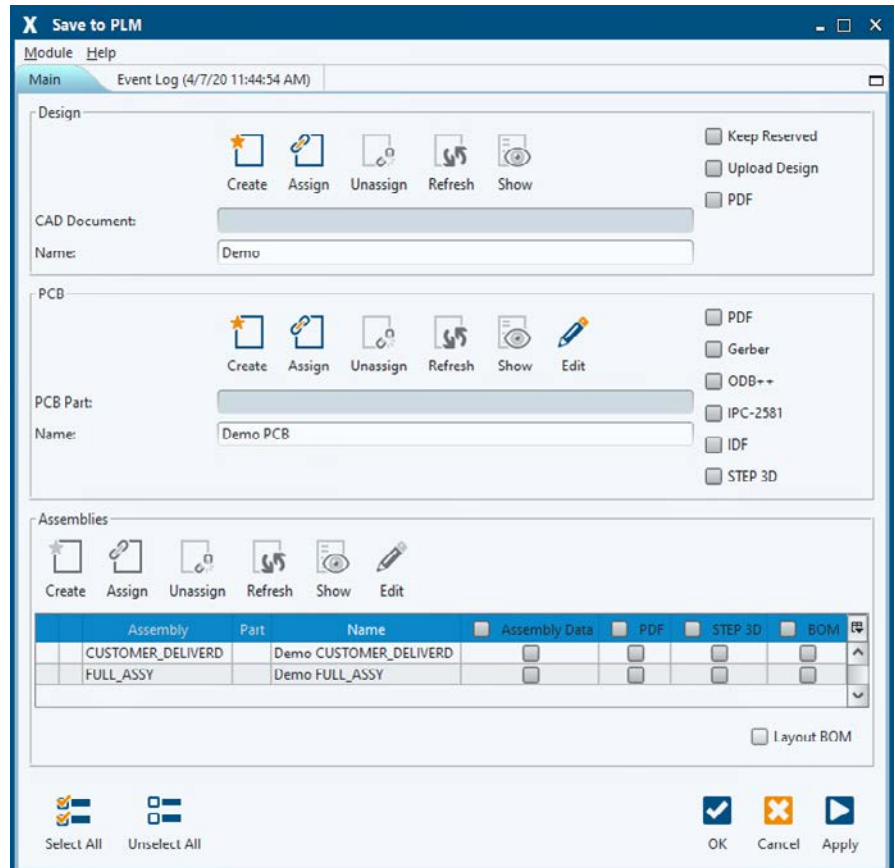
- Automatically creates the main object in PLM and associates it to the ECAD design.

FEATURES: PCB

- Automatically creates related output objects in PLM and links them to the bare board object.

FEATURES: PCB ASSEMBLIES

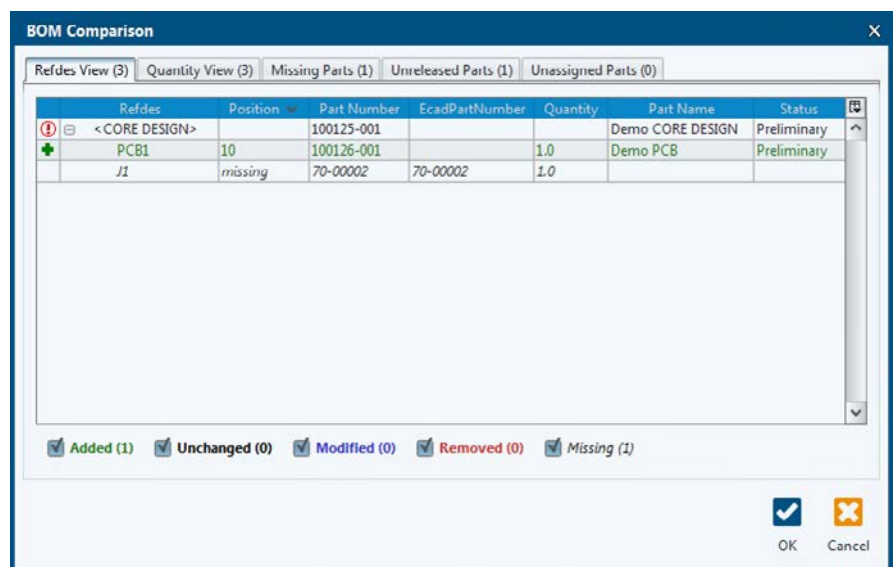
- Automatically creates related output objects in PLM and links them to the assembly variant objects.



BOM COMPARISON DIALOG

This module is used for the management of the Bill of Materials

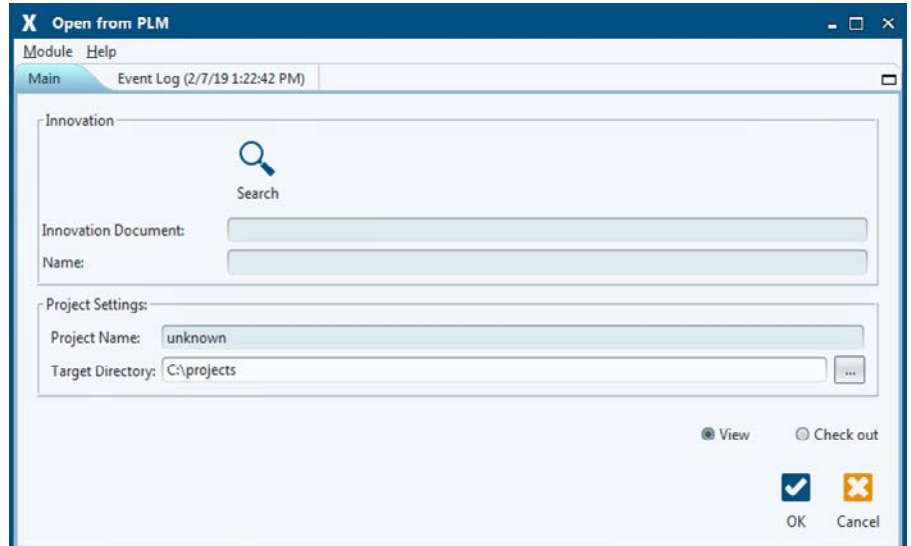
- The integration automatically reads the BOM from ECAD and prepares it for uploading to PLM.
- Compares the BOM in both systems and shows differences in the BOM Comparison dialog.
- Automatically calculates quantities for each BOM item in PLM.



OPEN FROM PLM

This module is used for searching and opening designs from PLM

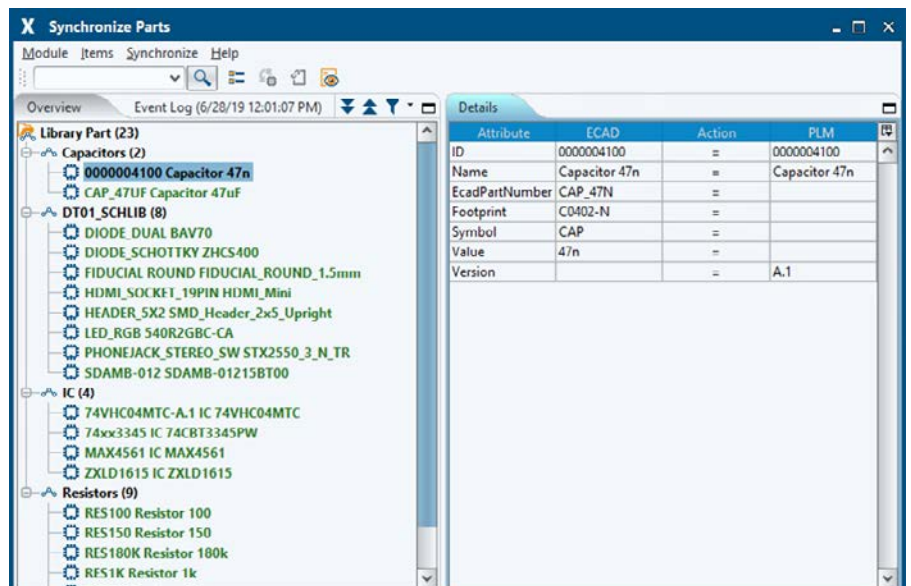
- Search for an existing design in PLM.
- Create a local copy of the design.
- Open the design in read-only mode or for editing in ECAD.



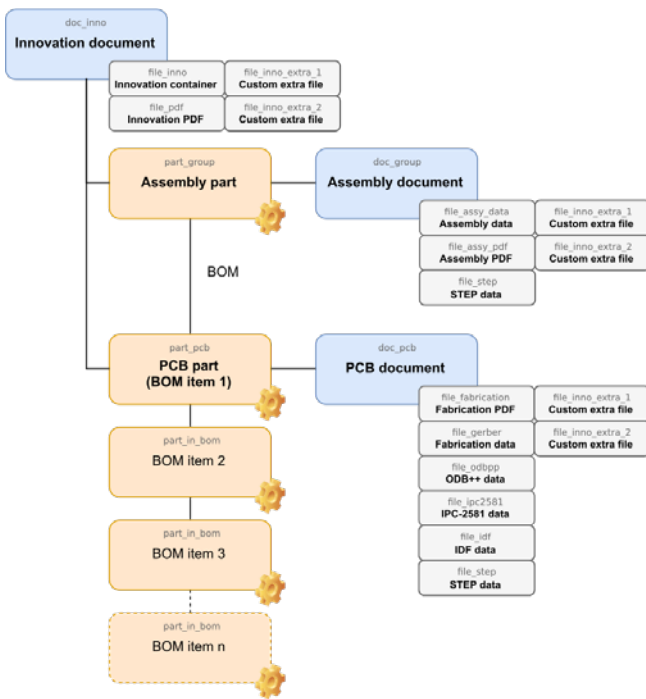
SYNCHRONIZE PARTS

This module is used to synchronize components, articles and attributes between ECAD and PLM.

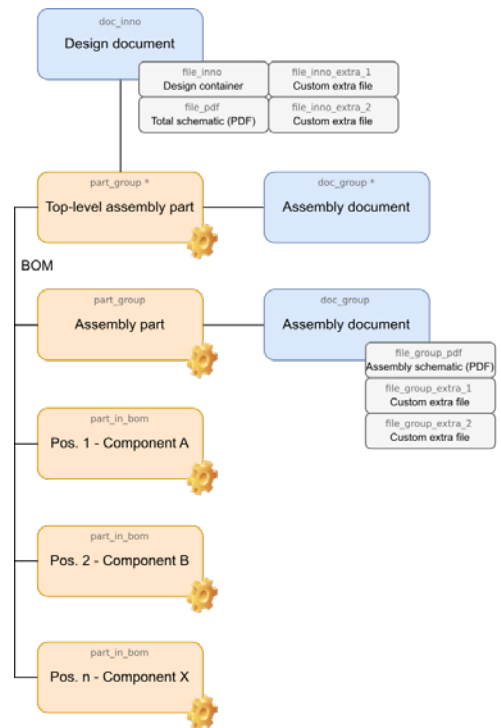
- Search and select components by class or part number.
- Load missing components in PLM resulting from the last BOM upload.
- Automatically create new articles for missing components in PLM.
- Manually associate unlinked components with existing articles in PLM.
- The integration automatically updates attribute information bi-directionally between the ECAD library database and PLM.



DATA MODEL ELECTRONIC-CAD



DATA MODEL ELECTRIC-CAD



LEGEND

- Orange: PLM articles
- Blue: PLM documents
- Grey: PLM attachments

XPLM Integration Platform – the efficient connection between MCAD and Aras Innovator

Optimize your development process with the centralized creation and management of BOMs and product-related design data.



THE CHALLENGES

The needs for consistent information flows and processes, and to be able to launch innovative and high-quality products, are just some of the challenges companies face when trying to manage the efficient collaboration of design teams across various locations.

Coupled with the new challenges created for businesses by digital transformation and the prevalence of Industry 4.0 and IoT, firms are increasingly searching for a solution to facilitate cross-disciplinary cooperation in their production of complex products.

THE SOLUTION

The XPLM Integration Platform provides efficient and robust PLM integrations for market-leading MCAD applications. The solution is a prerequisite for supporting efficient engineering processes and enhances the collaborative performance across your organization.

While increasing the opportunity for design innovations, data structures in both MCAD and PLM are integrated. The ability of bidirectional exchange of CAD documents, bill of materials, parts, classification and item status is ensured. Early review and collaboration on parts, sub-system and overall product design enables design optimization from every perspective.

The XPLM Integration Platform is fully customizable, easing the challenges of installation and reducing the total cost of ownership and maintenance costs.

KEY BENEFITS

- Interact with the PLM system directly from your MCAD application
- Avoid redundancies by using only one source system
- Save time and eliminate sources of error through automated data exchange processes
- Use standardized XPLM Integration Platform functions and add customer-specific processes at any time
- Benefit from easy extensibility in data and processes
- Achieve complete traceability through your product development process with the XPLM Integration Platform more quickly
- Avoid manual processes



**SECURE AND
CONSISTENT
INTEGRATION
BETWEEN
ARAS INNOVATOR
AND MCAD**

MAIN FEATURES

XPLM Integration Platform manages MCAD documents and files, items and bill of materials as well as change and release handling by using standardized functionalities:

- Document and file management
- Management of complex MCAD structures
- Support of all relevant MCAD objects
- Create and Update of items and BOM
- Workflow and release management
- Check-in and check-out from MCAD
- Automatic rename to unique file names
- Take and release ownership
- Management of multiple revisions
- Save preview before final saving
- Search in/load from PLM, directly via MCAD
- Bidirectional exchange of properties
- Update PLM attributes from MCAD
- File conversion (e.g. Viewables)

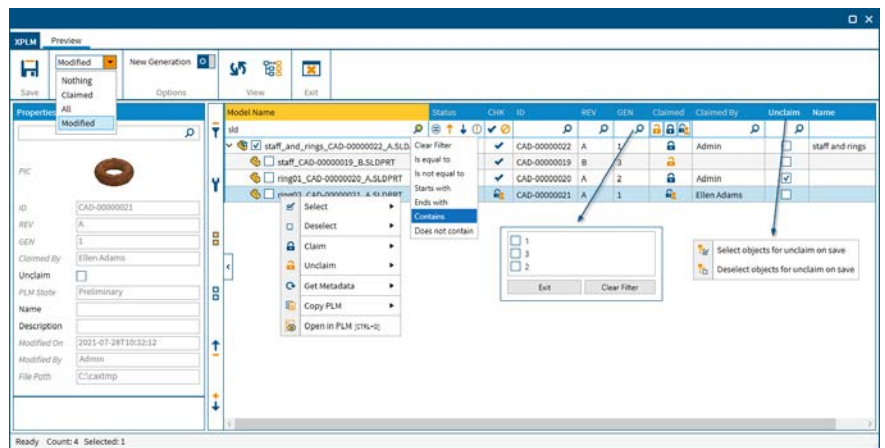
AVAILABLE INTEGRATIONS

MCAD	
AutoCAD	Siemens NX
Autodesk Revit	Solid Edge
Catia V5 / V6	SOLIDWORKS
Creo Elements/ Direct	ME10
Creo Parametric	Bentley Microstation
Inventor	Onshape

SAVE TO PLM

This module is used to manage MCAD engineering information in PLM.

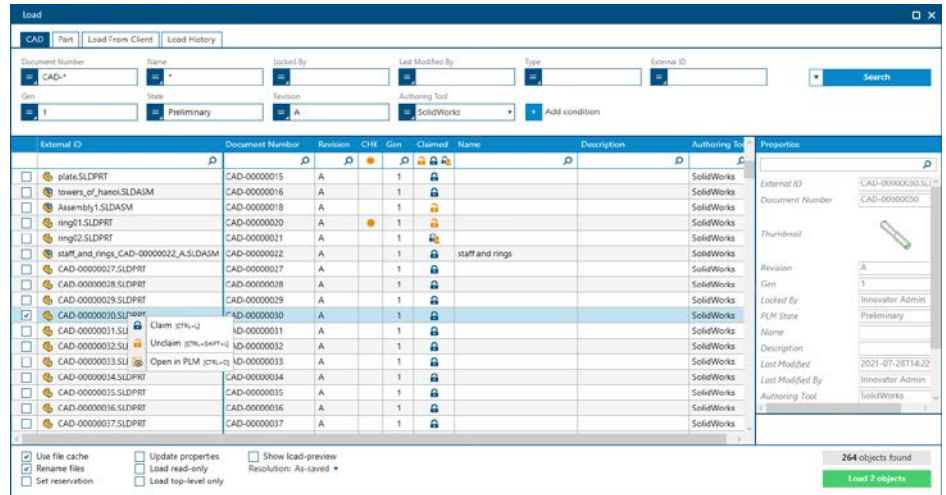
- Access inside the MCAD environment
- Analysis of the structure of current CAD objects
- Save preview with with wide variety of save settings
- Check, update & change PLM related information
- Autimatically creates the main object in PLM



LOAD FROM PLM

This module is used for searching and loading of MCAD documents

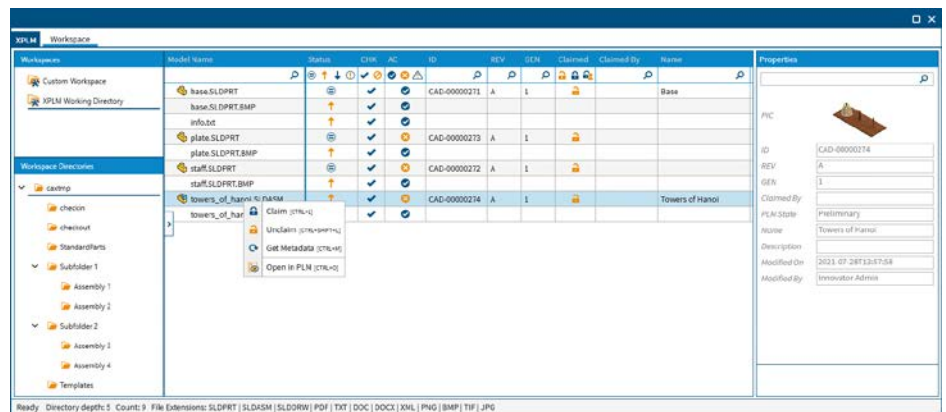
- Extensive search capabilities for objects in PLM
- Direct access inside the MCAD environment
- Load preview displaying the full structure of components
- Load multiple objects
- Load history



WORKSPACE BROWSER

The Workspace Dialog displays information about files in the local workspace.

- Multiple, user-defined workspaces available
- Claim & unclaim objects
- Display status of objects in PLM
- View metadata of every object



GLOSSARY



ARTICLE	Product in PLM that can either be built or purchased.	INNOVATION PART	Data model object in PLM that manages the entire project.
ASSEMBLY DATA	Data model object in PLM with the assembly data for the PCB.	INNOVATION PDF	Data model object in PLM with the master schematic as a PDF file.
ASSEMBLY DOCUMENT	Data model object in PLM that manages the assembly data of the PCB.	IoT	Refers to a system of machines, systems and devices networked with one another via and with the Internet.
ASSEMBLY PART	Data model object in PLM with the BOM items of the assembly variant.	PCB	Printed Circuit Board – bare (unassembled) board with the electrical connections of electronic components.
ASSEMBLY PDF	Data model object in PLM with the variant-specific assembly drawing as a PDF file. Certain authoring systems including the schematic in this file.	PCB DOCUMENT	Data model object in PLM that manages the fabrication information of the bare (unassembled) board.
ATTRIBUTES	Properties for objects in the design and the data model.	PCB PART	Data model object in PLM that represents the bare (unassembled) board.
BOM	Bill Of Material – list of components/articles.	PCB PDF	Data model object in PLM with the fabrication drawing(s) for the PCB as a PDF file.
BOM HEADER	Unique ID in the project to group components according to structure indicators.	PROJECT	Native design files in ECAD containing schematics, PCB layout and other related data.
BOM ITEM	Position in the BOM with unique ID, quantity and other attributes.	SCHEMATIC	Functional diagram with electrical and/or electronic components and the connections.
COMPONENT	Component in the ECAD library database.	SCHEMATIC DOCUMENT	Data model object in PLM that manages the schematic.
DATA MODEL	Defines objects and the relationship between these objects for a certain design in PLM.	SCHEMATIC PDF	Data model object in PLM with the variant-specific schematic as a PDF file. Certain authoring systems including the assembly drawing in this file.
ECAD	Electric/Electronic Computer Aided Design – software-based development used in electrical engineering and electronic design.		
FABRICATION DATA	Data model object in PLM with the fabrication data (Gerber and drill files, etc.) for the bare (unassembled) board.		
Industry 4.0	Concept for the comprehensive digitization of industrial production and includes cloud and IoT.		
INNOVATION CONTAINER	Data model object in PLM with the native design files.		
INNOVATION DOCUMENT	Data model object in PLM that manages the native design.		



HEADQUARTERS

XPLM Solution GmbH
Altmarkt-Galerie Dresden, Altmarkt 25
01067 Dresden, Germany
Office: +49 351 82658-0

OFFICE USA

XPLM Solution Inc.
1900 West Park Drive, Suite 280D
Westborough, MA 01581 USA
Office: +1 508 753-7500

Mail: marketing@xplm.com