



Allegro Pulse

Design collaboration, traceability, and visibility

The Cadence® Allegro® Pulse tool connects management, engineering, and other business stakeholders to work-in-progress design data, ensuring everyone has near-real-time insights early in the project. Together they can contribute to the design in a way that doesn't burden the teams. Managers can see at a glance whether projects are on schedule, meeting cost targets, and standards compliant—while engineers have access to the up-to-date component and supply chain data they need inside the design environment. Parts compliance is guaranteed by allowing the component engineering or supply chain to influence preferred parts early and enforcing their selection through the design process. Allegro Pulse closes the gap by providing a real-time collaborative view of the work in progress bill of materials (WIP-BOM), allowing companies to manage the cost and risk of a project in real time. The electronics design process is a critical part of realizing a company's end product. Allegro Pulse allows seamless integration into the corporate product lifecycle management (PLM) system, without requiring the engineers to spend time in the business system. With Allegro Pulse, engineers' data is automatically version controlled, made collaborative, and integrated into the enterprise, while allowing engineers to focus on design, managers to focus on productivity, and companies to deliver end products.

Overview

The real power of an organization is in the expertise of every member of the team to work collaboratively. These experts need to understand every step of the design process if they are to contribute their best to the project. They need to understand the status of a project along with the confidence of knowing the job is being done right from the beginning. Allegro Pulse provides a single collaborative platform focused on the productivity of the team. Allegro Pulse manages the CAD library and designs with automatic version control. Processes are defined with automated workflows enabling enhanced

design productivity and continuous process improvements. Concurrent team design allows teams to simultaneously work on the same project across geographies and even corporate boundaries. BOMs are kept up to date, allowing supply chain influence throughout the process and minimizing the risk of exposure when the project gets to manufacturing. All information is secured under roles and permissions, allowing traceability throughout the design process. Allegro Pulse makes the electronics design process a fully integrated part of the overall product lifecycle, enabling the creation of a complete digital thread of the product.

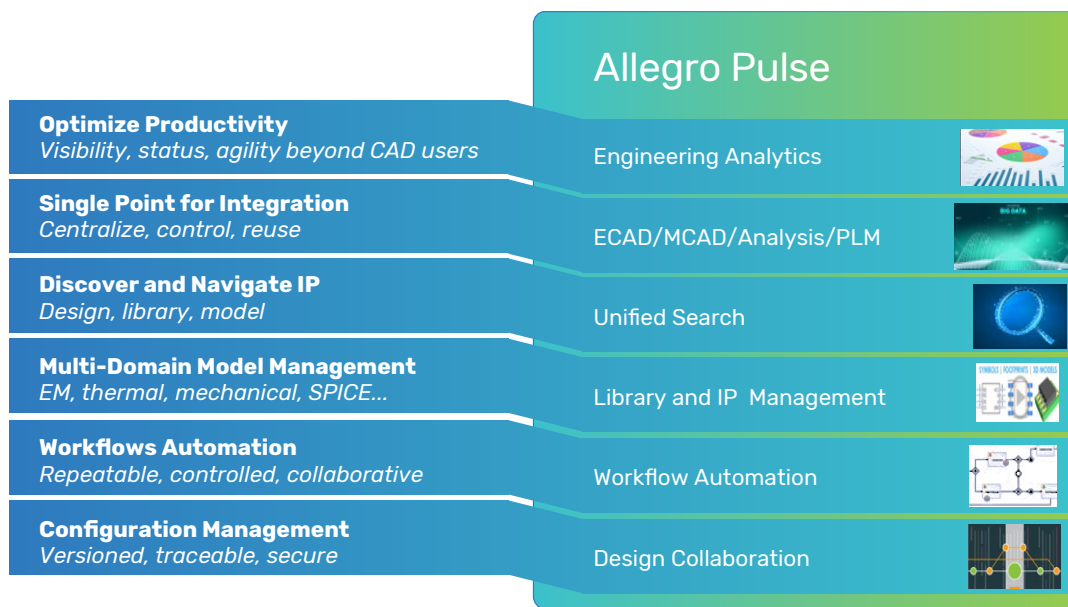


Figure 1: Allegro Pulse enables value across multiple stakeholders by managing work-in-progress design data management and team collaboration

Library Management

Allegro Pulse provides a complete solution to author, verify, manage, and use the CAD library. Librarians are provided state-of-the-art authoring solutions that enable a fully curated ECAD library. The curation process ensures that each library element is accurate and complete, providing the appropriate models for each phase of the design process. This includes PCB footprints, schematic symbols, mechanical representations, supply chain and procurement information, and all relevant technical parametric information. Allegro Pulse provides librarians a unified environment, simplifying the creation and curation of the library to ensure the right parts are made available to right people at the right times.

Engineers and librarians can access a collaborative and configurable new part request (NPR) system, reducing the effort and turnaround time for new library models. A combined NPR dashboard is accessible from a browser or within the design tools to track the status of each part's progress.

Find Instead of Search

Engineers must locate the best component to satisfy technical and business needs. Allegro Pulse's unified search provides a modern, fully parametric search facility that reduces the time an engineer spends searching for components and IP. Engineers are provided with a customizable view to sort and filter the complete CAD library.

As many designs may require components not yet in the CAD library, unified search provides access to multiple content providers, extending the search to billions of parts. If a part is located in a content provider, unified search is fully integrated with the Allegro Pulse NPR system; information from the content provider is downloaded and used to initiate the part request.

Collaborative Design

Allegro Pulse transparently uses version control for the designs' schematic and PCB layout. With "Version On Save," the design is automatically saved as a version. Saving versions provides individuals the ability to explore design alternatives or perhaps roll back to a different point in time. Because versions are centrally stored, the company's IP is kept safe.

As design content is now fully version-controlled, individuals can now easily share and collaborate as part of a team. All designs are managed in the context of a project, and projects can be shared with other electrical engineers or PCB designers. Schematic designs can now be concurrent, allowing engineers to concurrently work on a design at the same time using either a sheet-based approach or a hierarchical approach. Engineers are no longer bound to iterating between PCB and schematic using file-based netlists. The PCB version and schematic version are linked and netlist changes are communicated through notifications, allowing designers to accept updates when appropriate while maintaining traceability throughout the process.

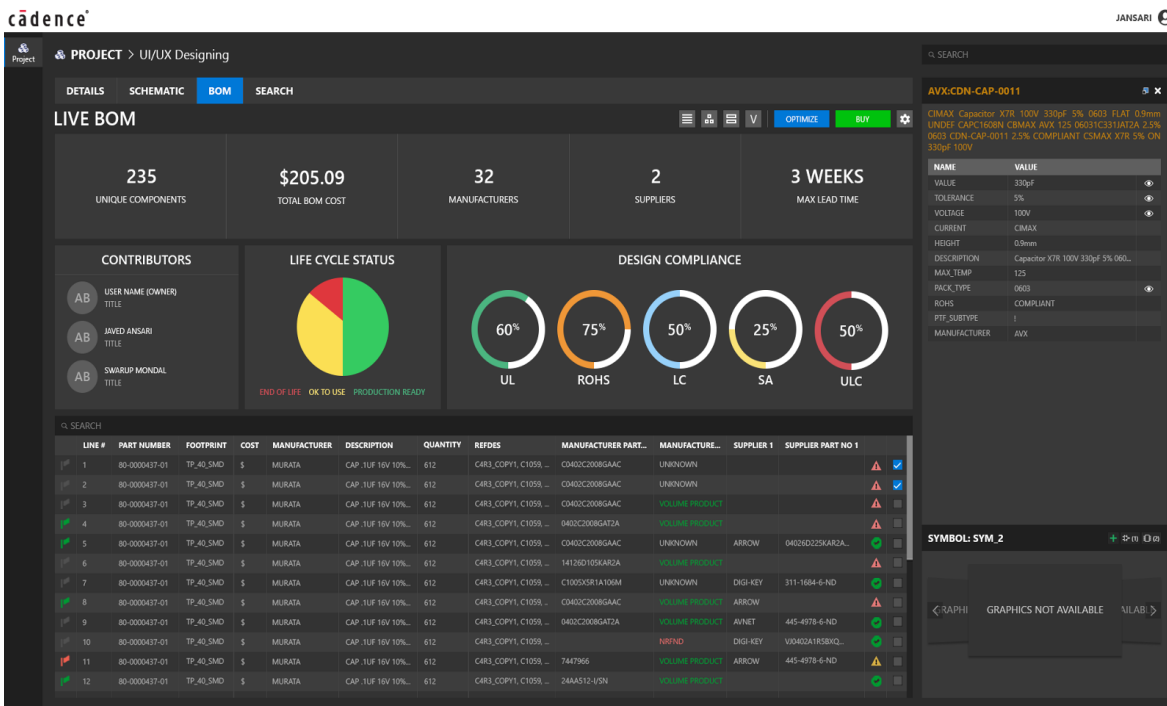


Figure 2: Allegro Pulse LiveBOM: Real-time access to a state-of-the-art BOM

Supply Chain Collaboration

Effective supply chain collaboration is dependent on real-time visibility of what is technically required and procurable to meet manufacturing demand. To enable such visibility, Allegro Pulse removes the notion of a static BOM and instead has made the BOM a collaborative workflow in the platform. No longer do engineers export spreadsheets and email to various stakeholders. As engineers use components in a design, Allegro Pulse’s LiveBOM capability automatically updates the BOM and makes it accessible to other stakeholders. Using a web browser, component engineers or supply chain professionals can get a real-time view of the BOMs to make real-time suggestions for improvement. LiveBOM also provides real-time statistics and rollups so everyone can keep track of the cost, time, and risk of the BOM.

Stakeholder Visibility Beyond Engineering

Allegro Pulse extends collaboration beyond the engineer’s desktop and provides insight and visibility to multiple stakeholders with the Allegro Pulse web participant. With web participant access, managers, supply chain professionals, component designers, and manufacturing, quality and even other design engineers can be part of the team collaboration using just a browser.

Workflow Automation

Allegro Pulse enables repeatable and traceable processes with a fully integrated workflow automation solution. Workflows can be created to drive specific portions of the design process, may include multiple participants, and may have phase/gate criteria to ensure proper adherence to a workflow. Workflows can be used to automate simple tasks for an individual or to manage the complexities of multiple people working on a design or project.

Enterprise Collaboration

The electronic design process is a critical part of the overall product realization in a company and must be integrated into the overall lifecycle. Allegro Pulse provides out-of-the-box connectors for all the major PLM systems from Oracle/Agile, PTC Windchill, Siemens Teamcenter, Dassault 3DEXPERIENCE, and Dassault Systems 3DEXPERIENCE WORKS. Once connected to PLM, engineers enjoy up-to-date part information supplied by the PLM system and the ability to update the PLM with the current BOM, 3D model data, and manufacturing deliverables with a single click.

Key Features and Benefits

Library Management	Ability to create, curate verified library IP ensuring technically and supply chain accurate library components
Design IP Management	Centrally controlled Design IP under full version control secures IP and makes it available for reuse
Design Collaboration	Improve productivity with multiple teams concurrently designing across roles, geographies, and company boundaries
Unified Search	Singular place to located component and design IP while enabling procurement and supply chain influence
Enterprise Collaboration	Direct integration to leading PLM systems, extending collaboration into the extended enterprise
Workflow Automation	Automate collaborative tasks, enabling traceable and repeatable processes
LiveBOM	Real-time access to the state-of-the-art design BOM, enabling multiple stakeholders to track and influence the BOM as the project progresses
Web Participant	Extend collaboration beyond the CAD desktop using a simple web browser allowing non-engineers to interact and track the progress of the designs in real time

Cadence Services and Support

- ▶ Cadence application engineers can answer your technical questions by telephone, email, or internet—they can also provide technical assistance and custom training.
- ▶ Cadence-certified instructors teach more than 70 courses and bring their real-world experience into the classroom.
- ▶ More than 25 Internet Learning Series (iLS) online courses allow you the flexibility of training at your own computer via the internet.
- ▶ Cadence Online Support gives you 24x7 online access to a knowledgebase of the latest solutions, technical documentation, software downloads, and more.
- ▶ For more information, please visit www.cadence.com/support for support and www.cadence.com/training for training.

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