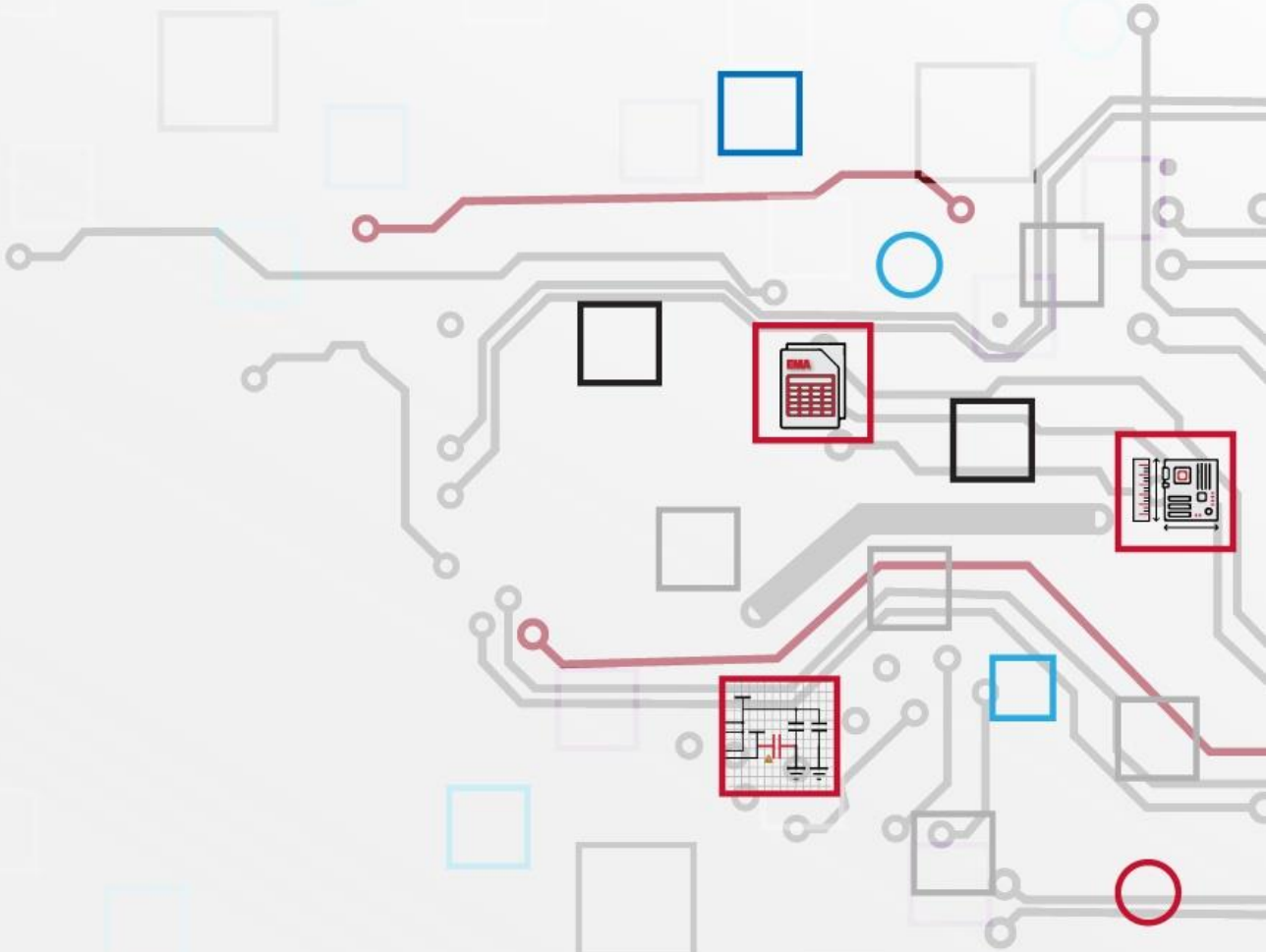
EMA Design Automation

WEBINAR

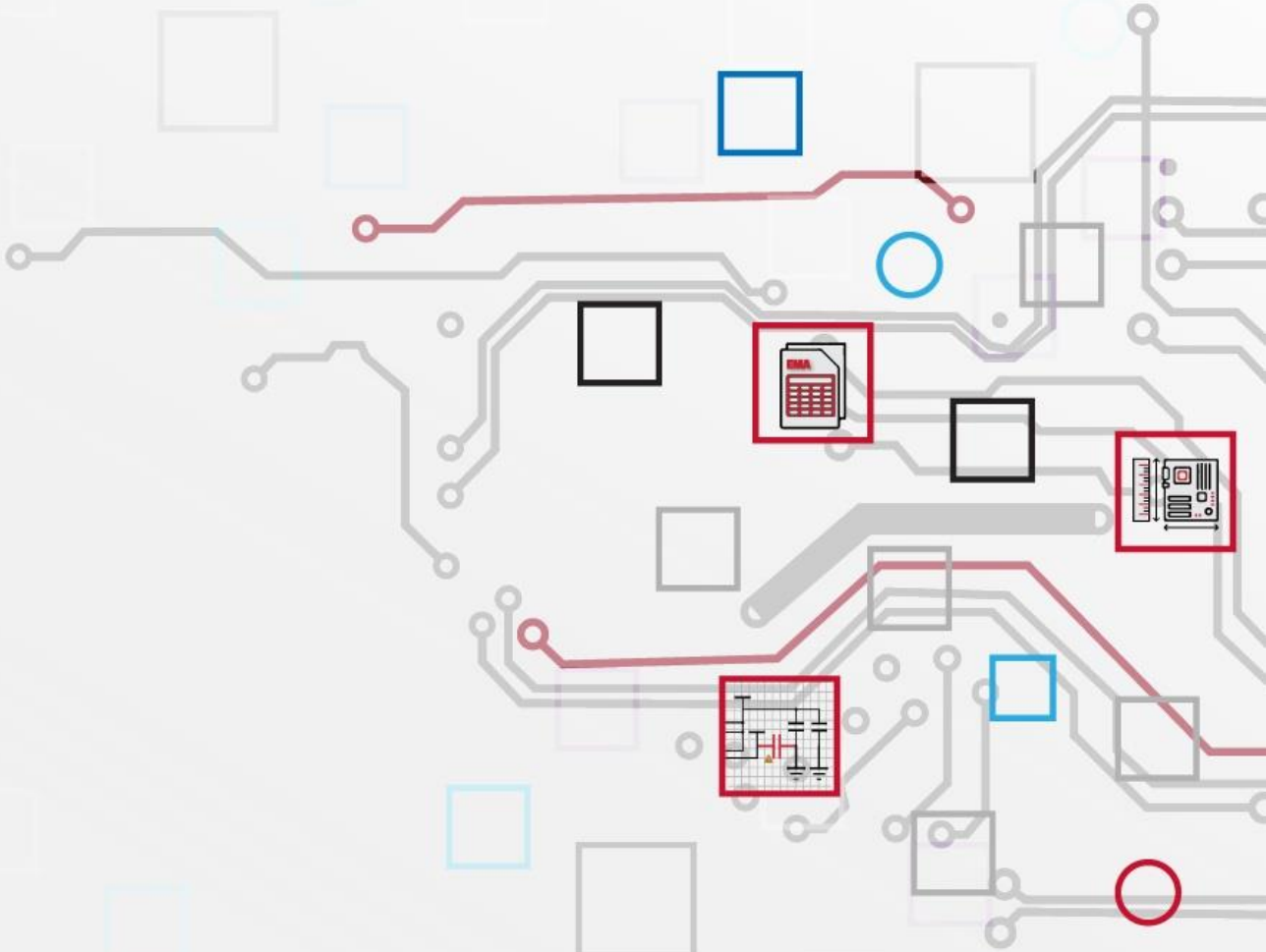
OrCAD X

Next Generation PCB Design Platform



Agenda

- Introductions & Housekeeping
- New Partnership
- Common Challenges
- What is OrCAD X?
- Demo
- Recap and Q&A



New Partnership

EMA Design Automation

ECAD Experts

30+ Years in PCB Design

Software – Support - Services

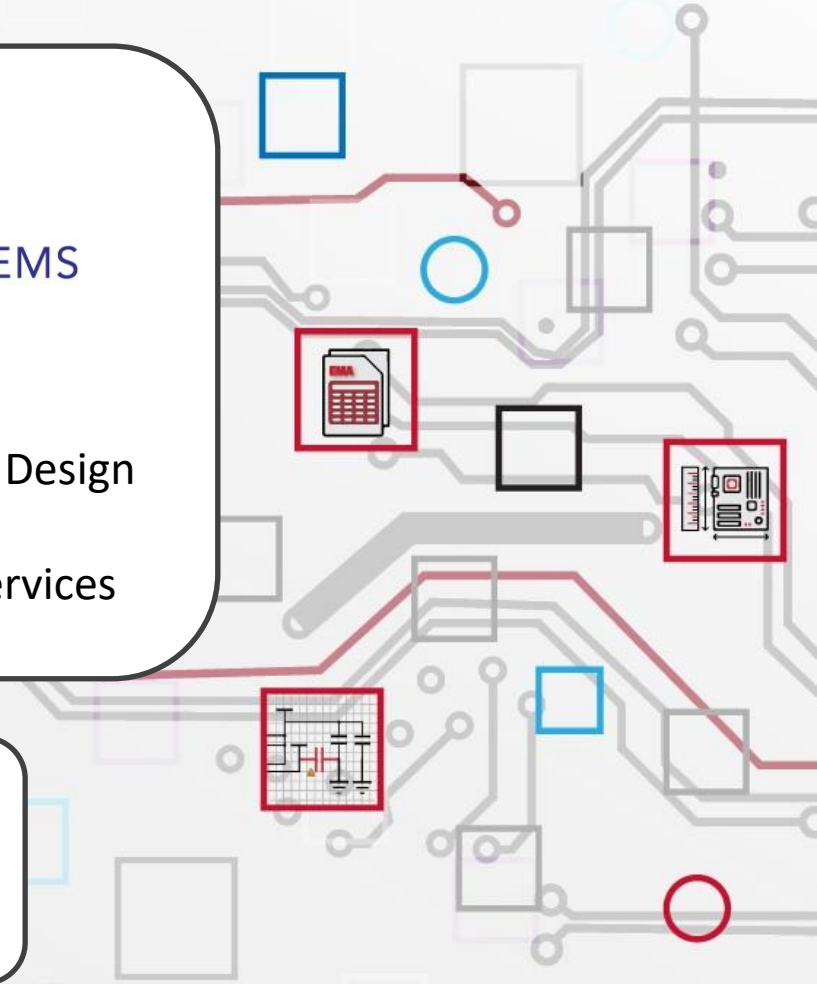
+

HAWK RIDGE SYSTEMS

MCAD Experts

30+ Years in Mechanical Design

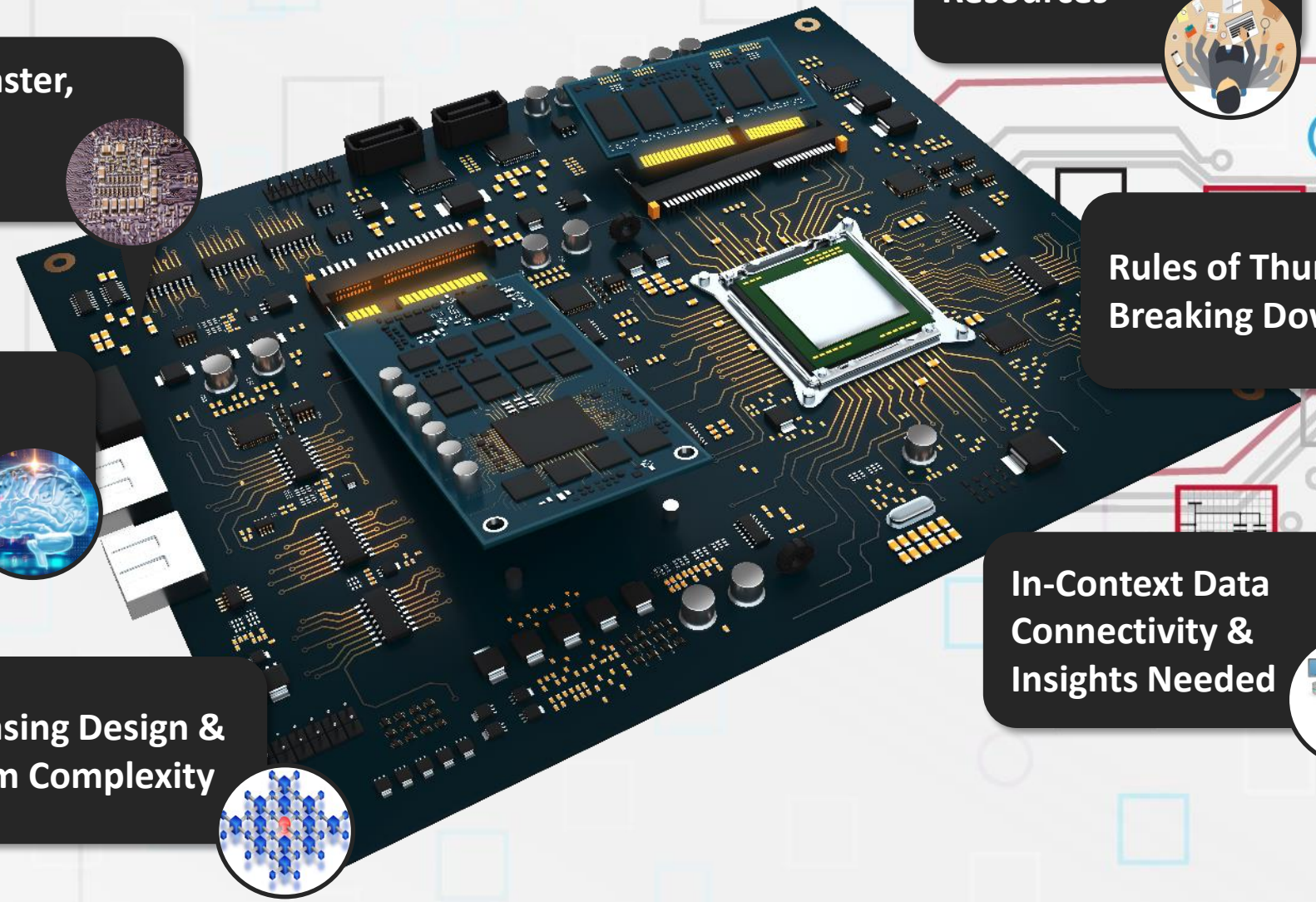
Software – Support - Services



Decades of Combined Electromechanical Software & Design Expertise

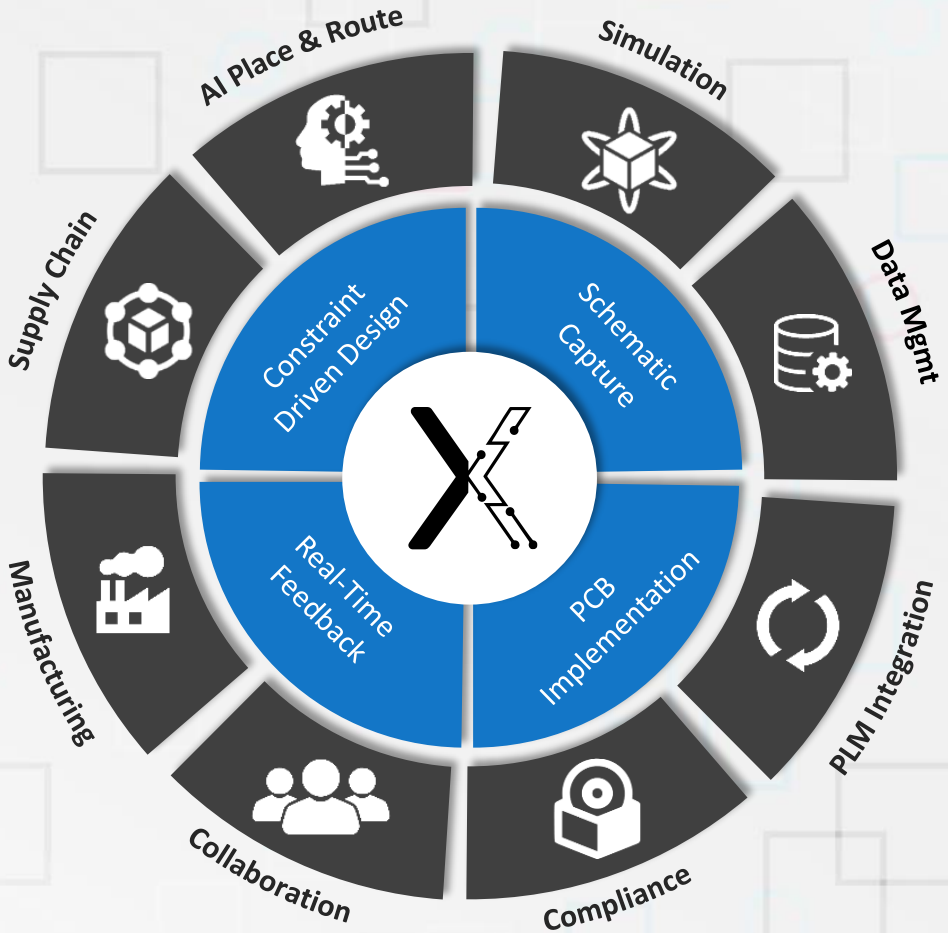
System Design Must Advance with Industry Challenges

EMA Design Automation



- Smaller, Faster, Cheaper
- More Work Fewer Resources
- Specialization Bottlenecks
- Rules of Thumb Breaking Down
- Increasing Design & System Complexity
- In-Context Data Connectivity & Insights Needed

What is OrCAD X?



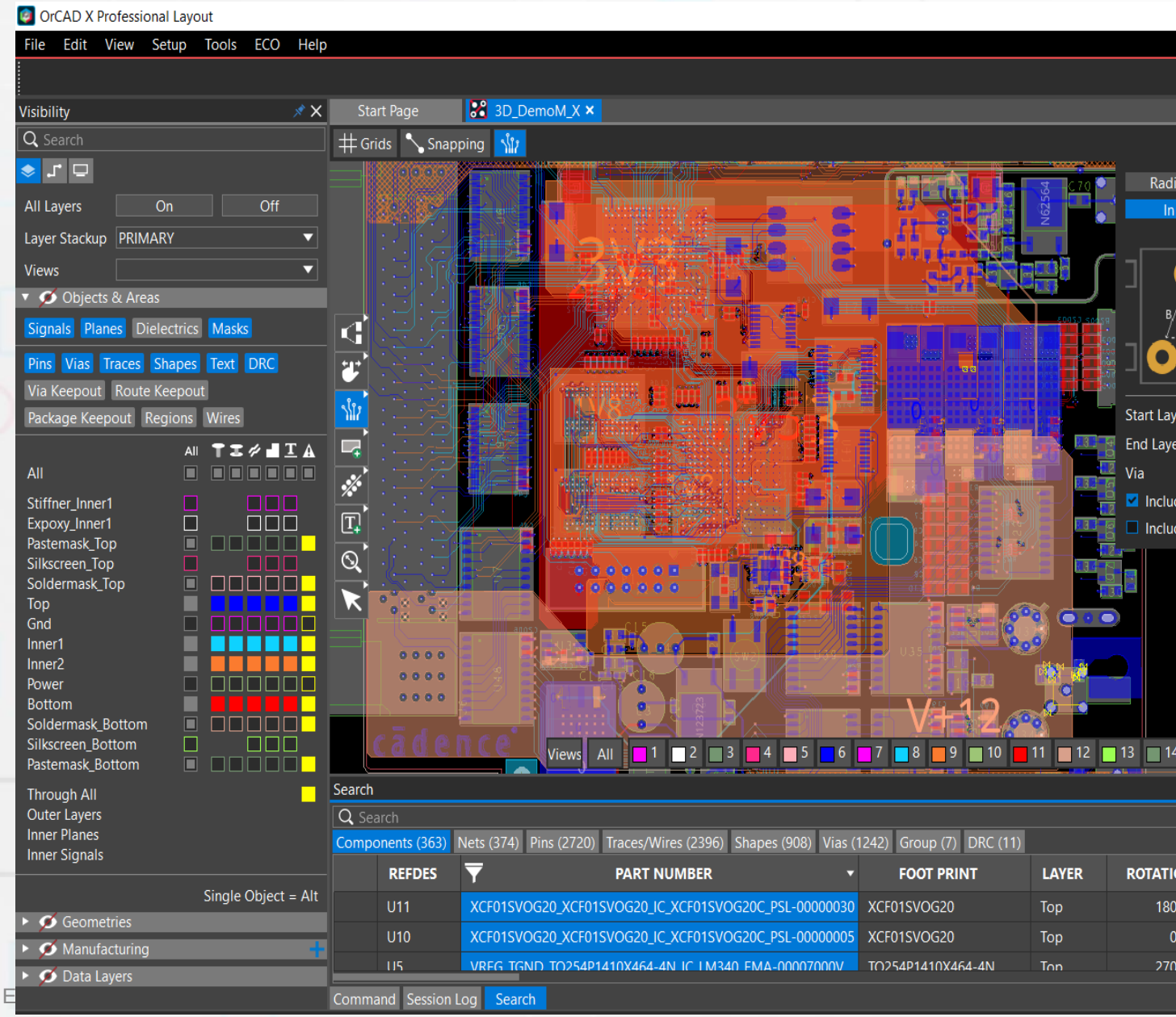
- Actionable Analysis
- HDI, Costing, Constraints
- Maximum Productivity
- Shift-Left, In-design Analysis
- In-Context Data, Cloud
- Scalable Platform, ECAD/MCAD

Platform Designed to Address the Current & Future Needs of Designers

LAYOUT & ROUTING

Presto

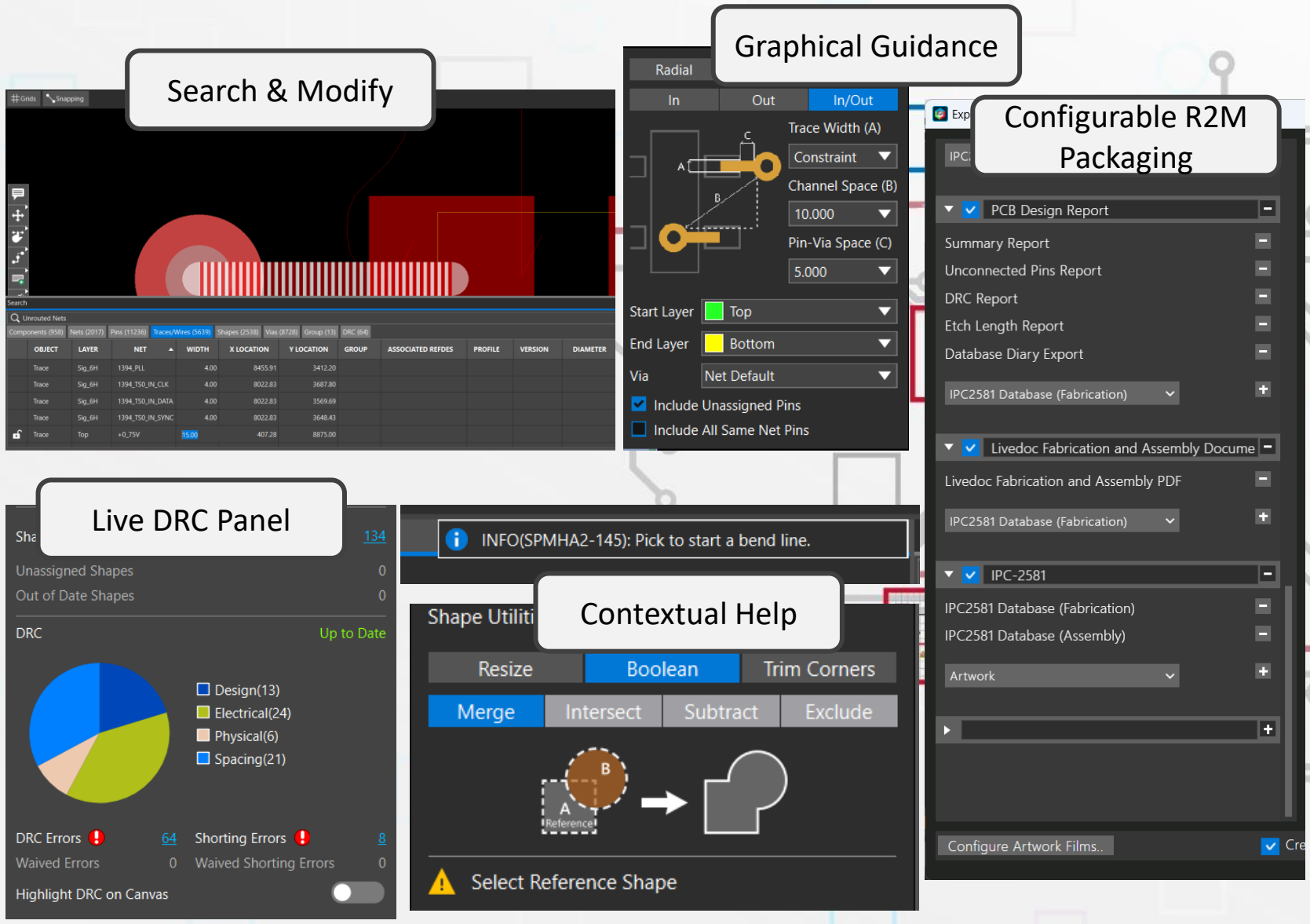
- New PCB Layout UX
- Focused on productivity & ease of use combined with powerful layout and routing engines of Allegro
- Fully compatible with OrCAD & Allegro PCB Editor (same .brd)
- Optional. Evaluate and leverage at your pace



LAYOUT & ROUTING

Presto

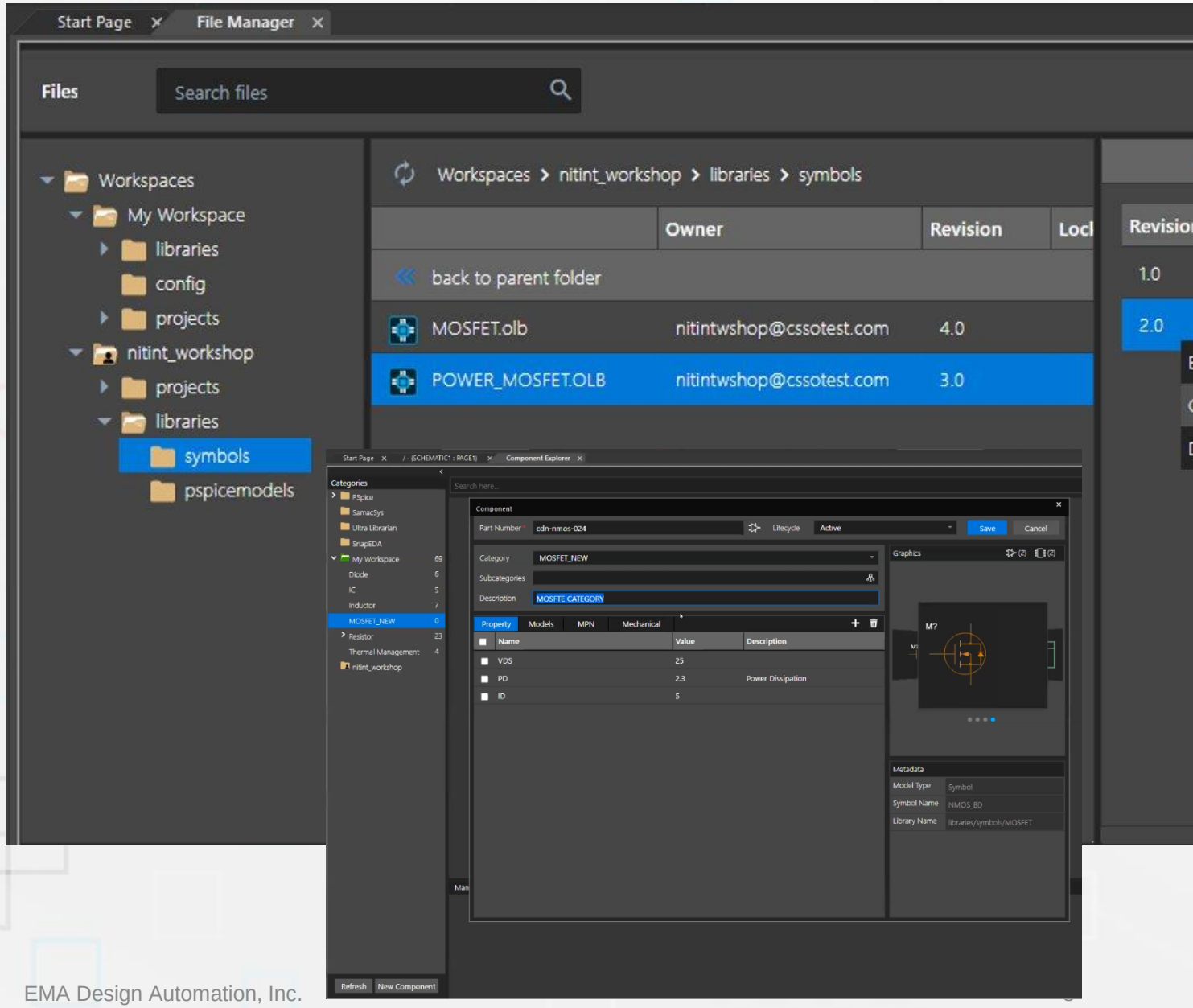
- Use model and UI overhaul
- Designed to make information discoverable, data presentation contextual
- Live links to drill into details where applicable
- Built-in search engine with live editing
- Visual help and guidance



CLOUD

Workspaces

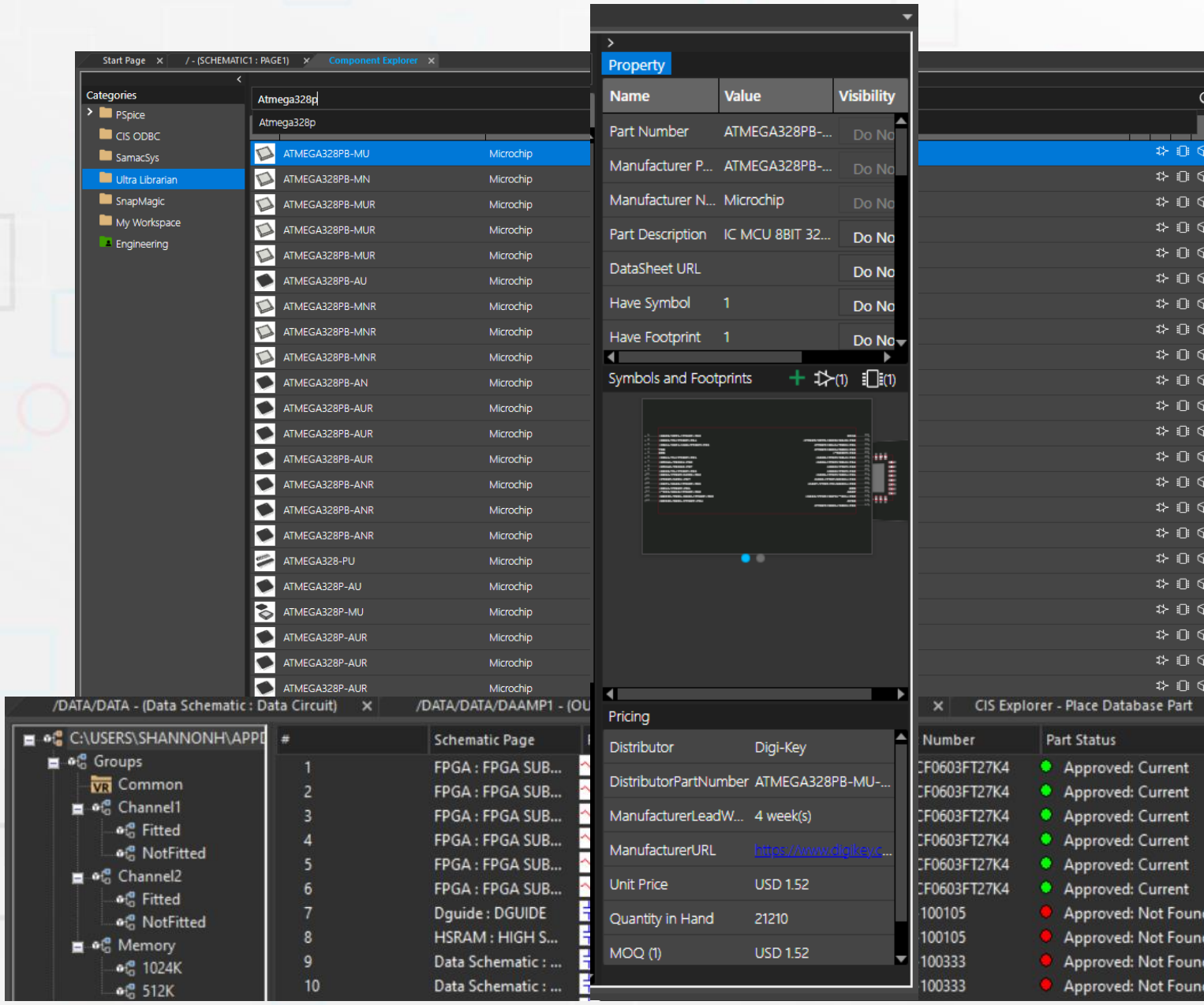
- Cadence Cloud Repository
- Store and share design files and libraries
- No setup and config required



Library & Modeling

Unified Libraries (CIS)

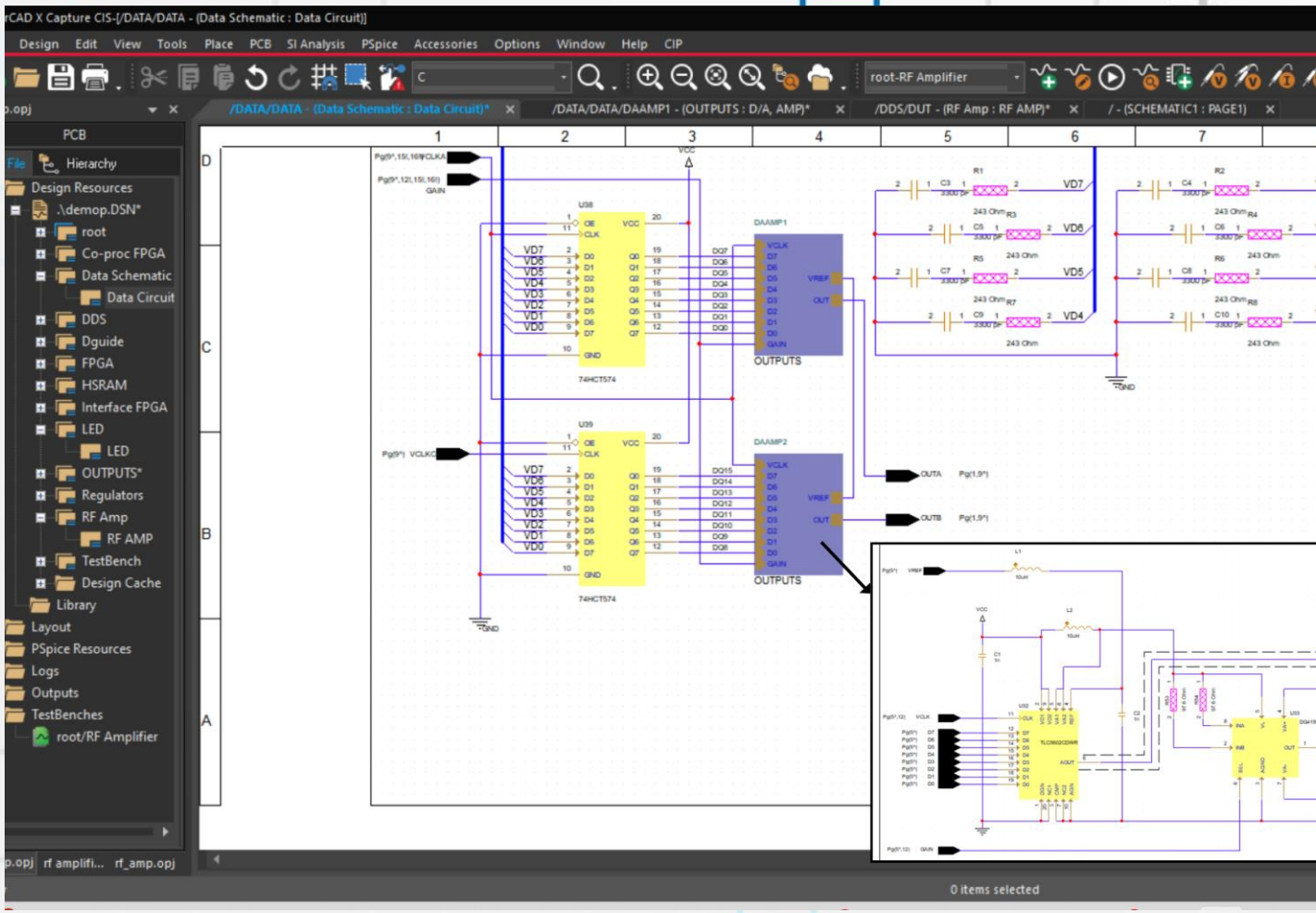
- Geometries & Parametrics
- Discoverable & shareable
- Track status & updates
- Connect to internal & external data sources
- Cloud & On-prem options



SCHEMATIC CAPTURE

Streamlined Design Capture

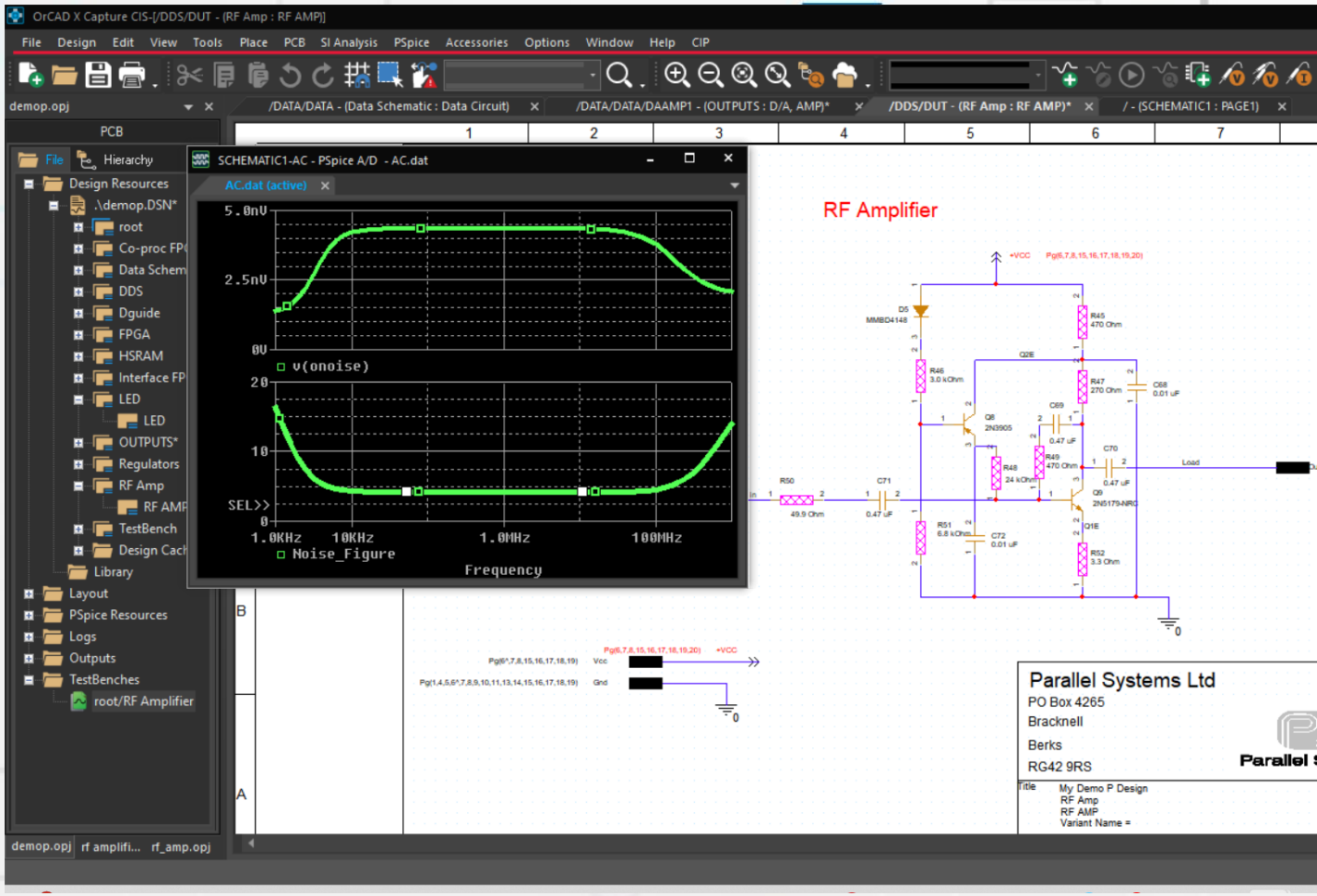
- Hierarchical Design
- Constraint Definition
- Real-Time DRC
- Connected to PCB and Simulation



SHIFT LEFT

Embedded SPICE Analysis

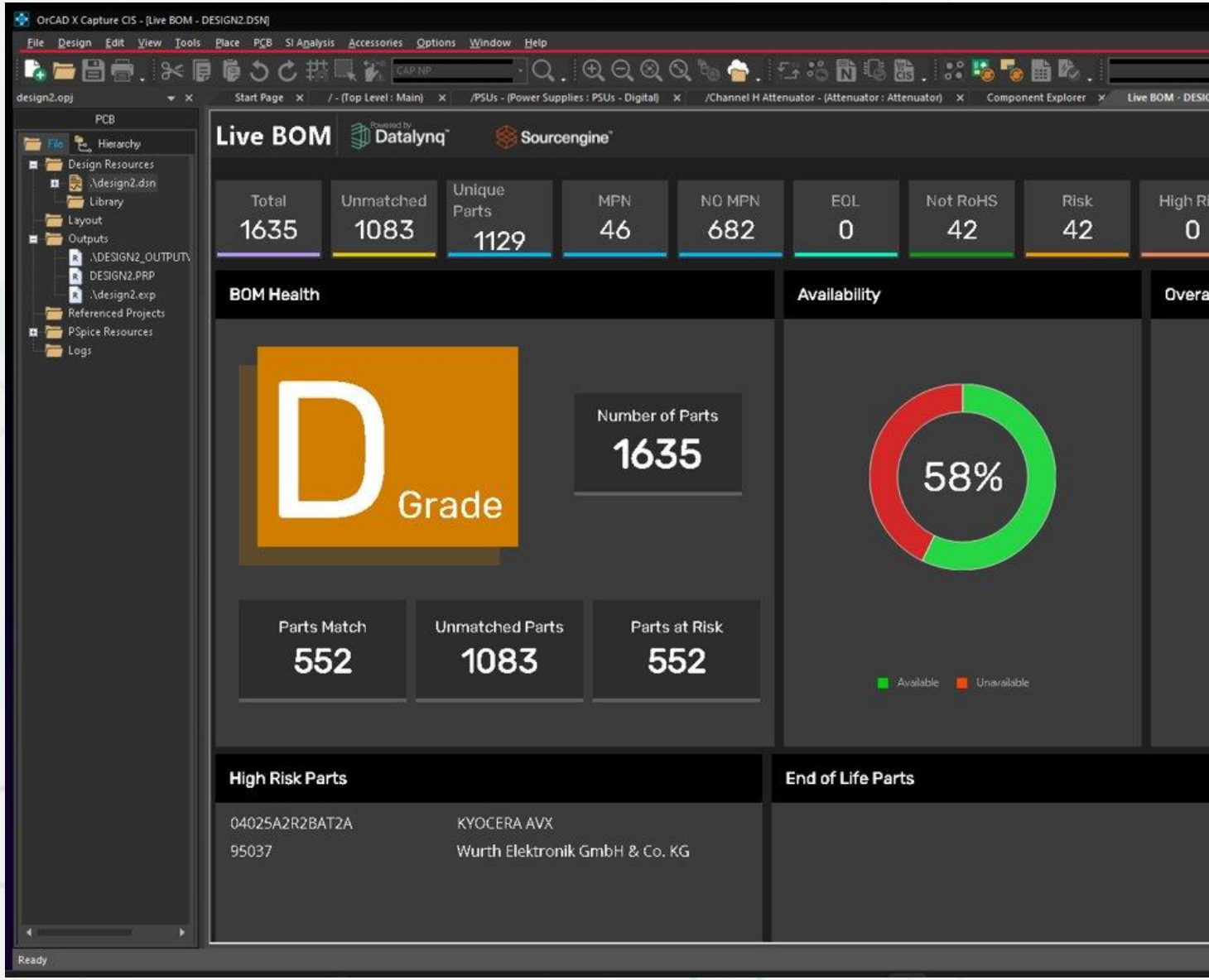
- Run SPICE analysis inside your PCB design environment
- PSpice Testbench functionality to partition design for sim & experimentation
- Perform reliability, yield, stress, and optimization analysis



SUPPLY CHAIN

LiveBOM

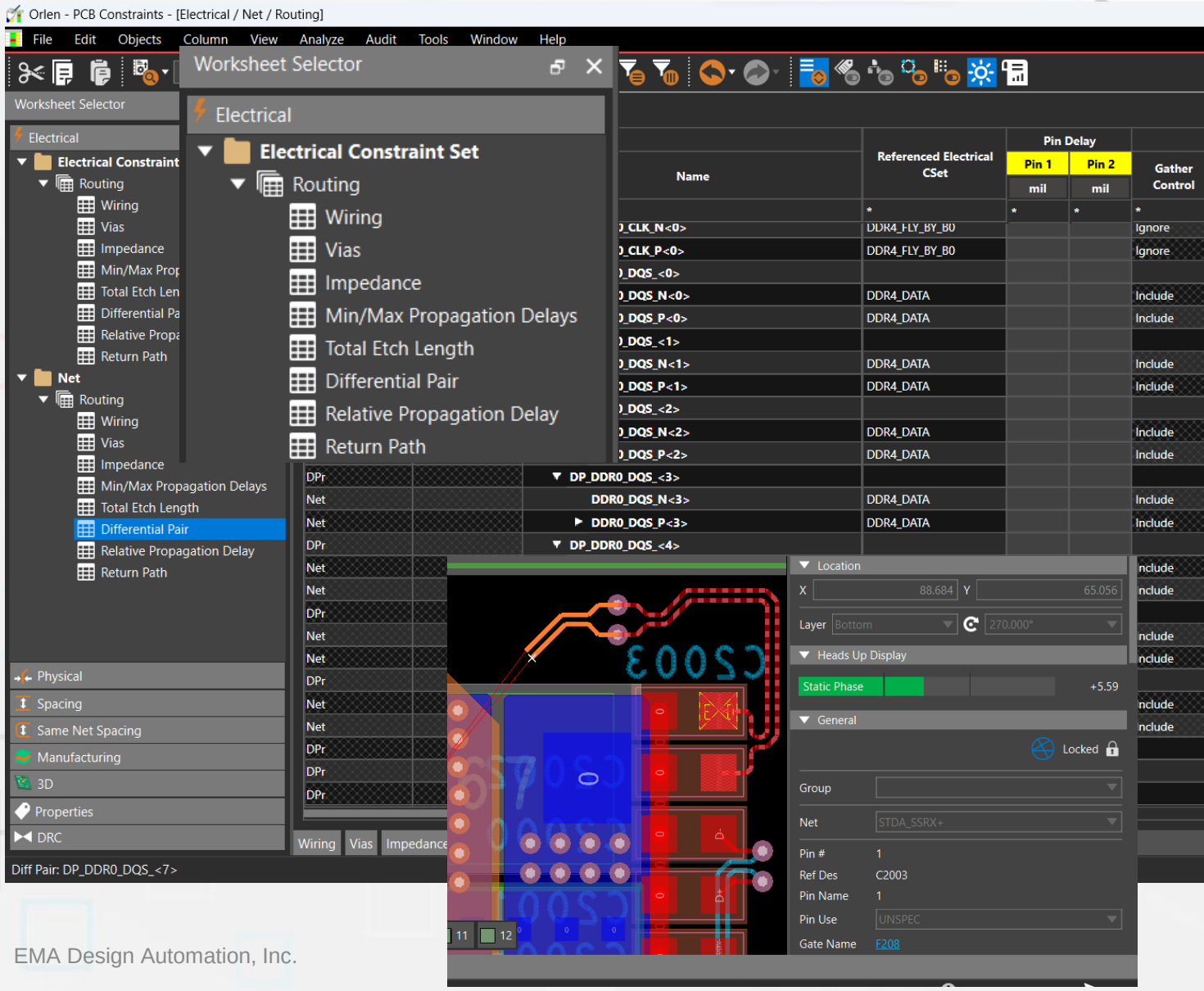
- On-demand supply chain intelligence
- Reviews and provides a grade
- Swap and update parts quickly as needed
- Ensure a compliant and orderable BOM
- Available via Cloud or On-Prem



CORRECT BY CONSTRUCTION

Constraint Management

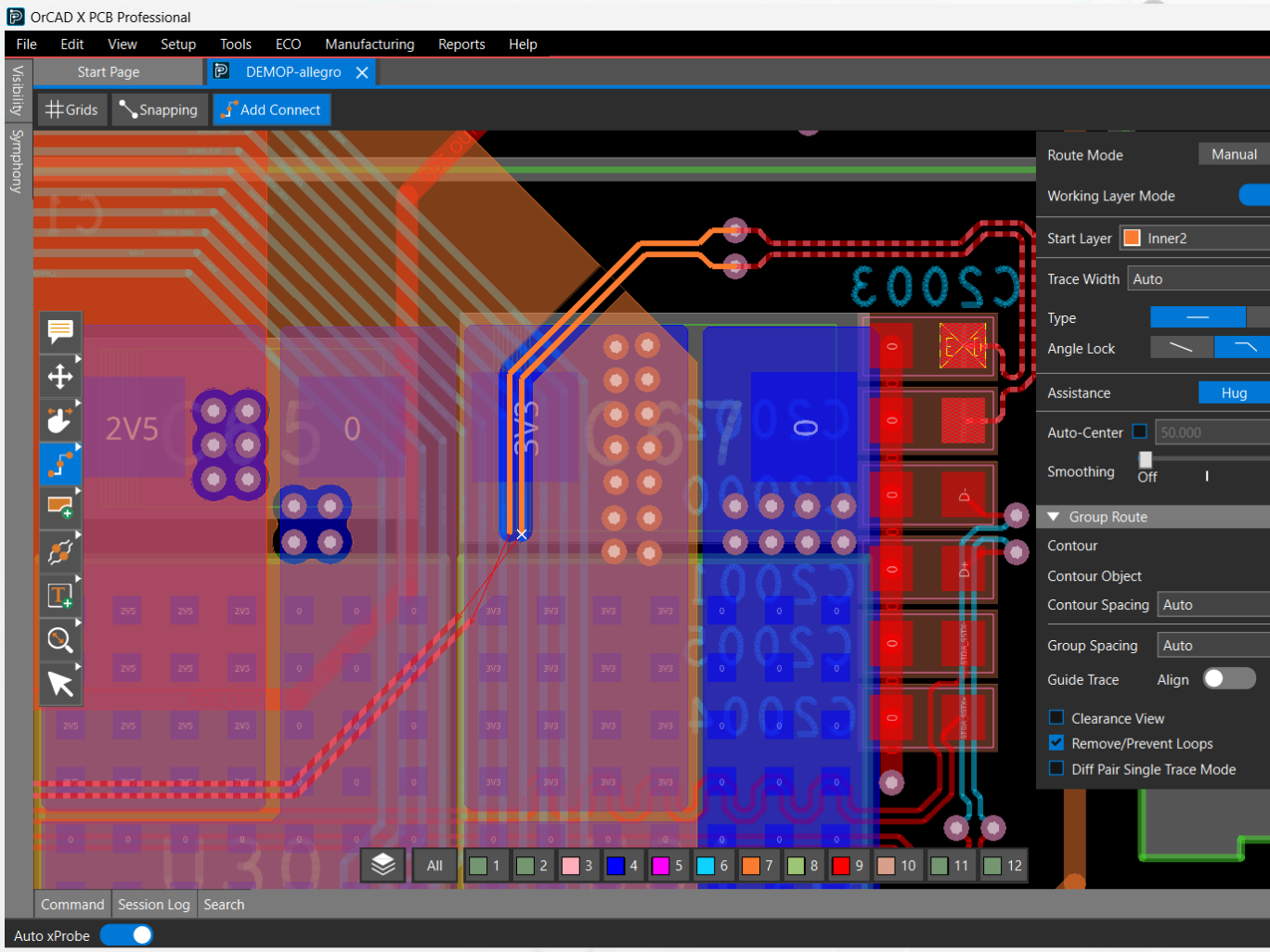
- Shift –Left with Full constraints at all levels
- View and set rules regardless of tier
- Ensure correct by construction design
- Physical, Spacing, Electrical Rules, DFM, 3D Constraints
- Real-Time Feedback



REAL-TIME FEEDBACK

Dynamic Shapes by Default

- All shapes are dynamic self healing by default
- No need to hide or re-pour
- Know impact of shape adjustments as they happen
- Freeze shapes only for special use cases

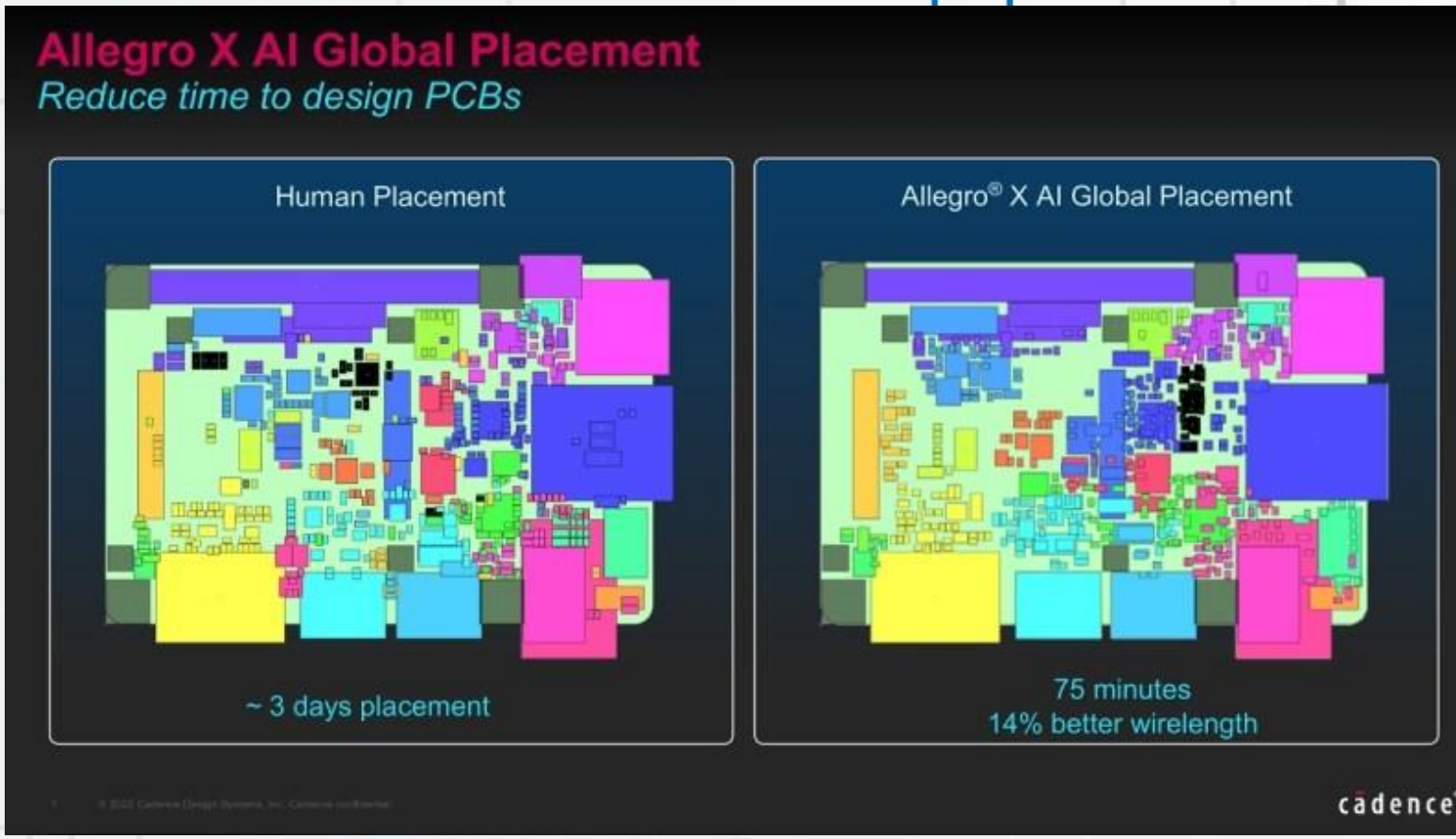


MAXIMUM PRODUCTIVITY

X AI

COMING SOON

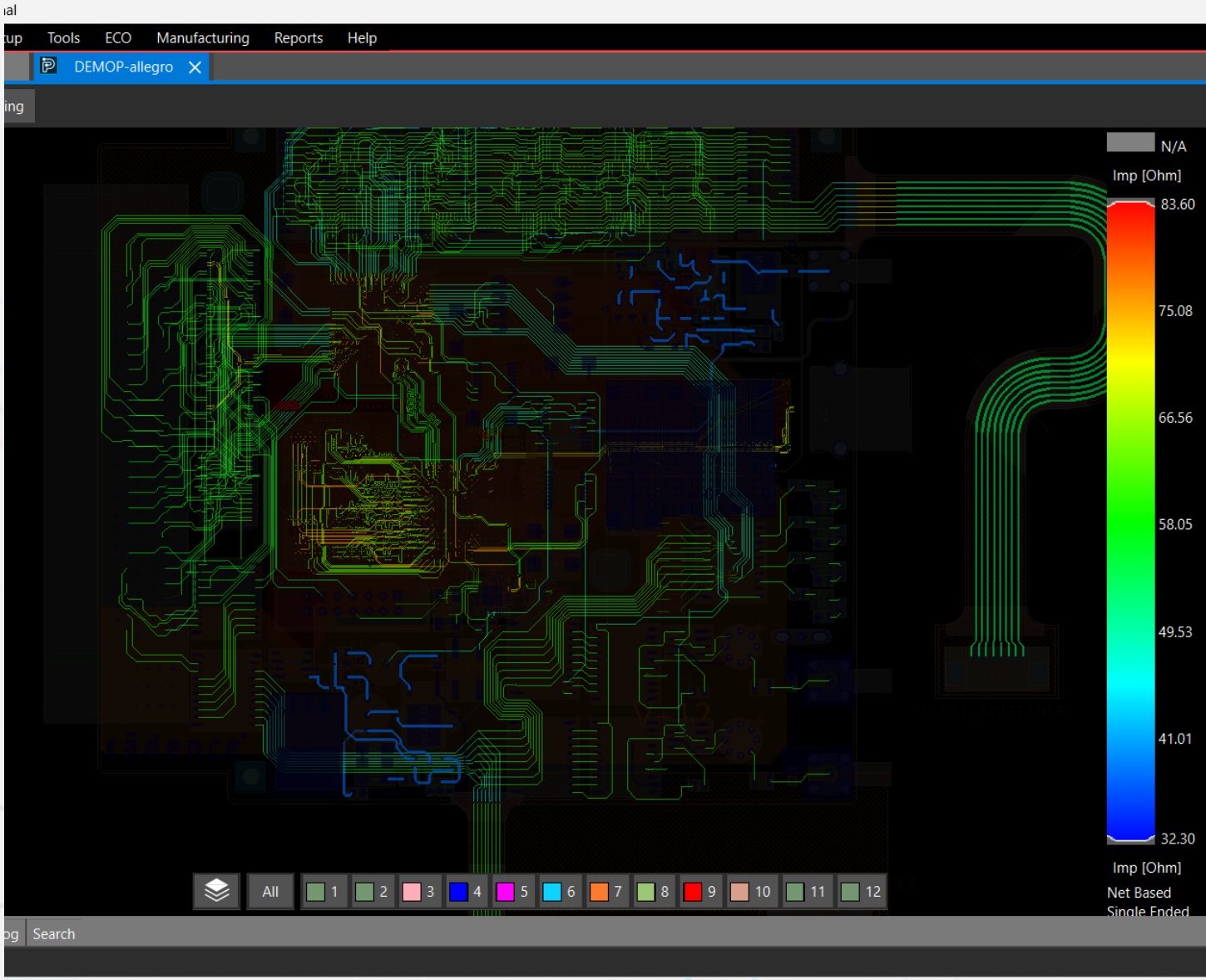
- AI Assisted PCB Design
- Built inside OrCAD X
- Dramatically reduce time for initial placement and plane creation
- Constraint, Schematic, DFM, and electrically aware



SHIFT LEFT

In-Design Analysis

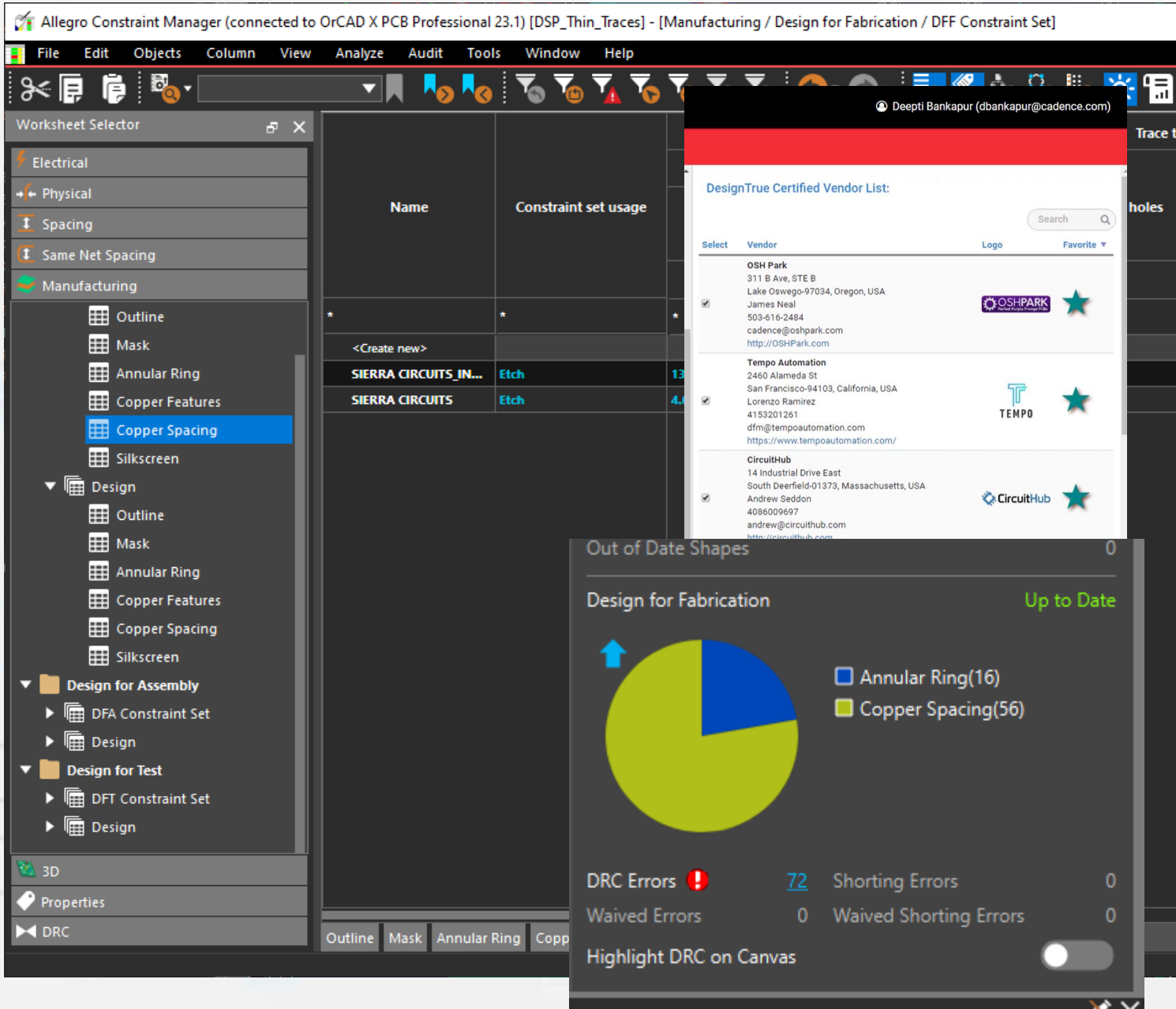
- Perform electrical analysis inside the design canvas
- Visual overlays make finding and fixing issues quick & effective
- Analysis to cover:
  - Impedance
  - Coupling
  - IR Drop
  - Crosstalk
  - Return path
  - Thermal (coming soon)



CORRECT BY CONSTRUCTION

DesignTrue DFM

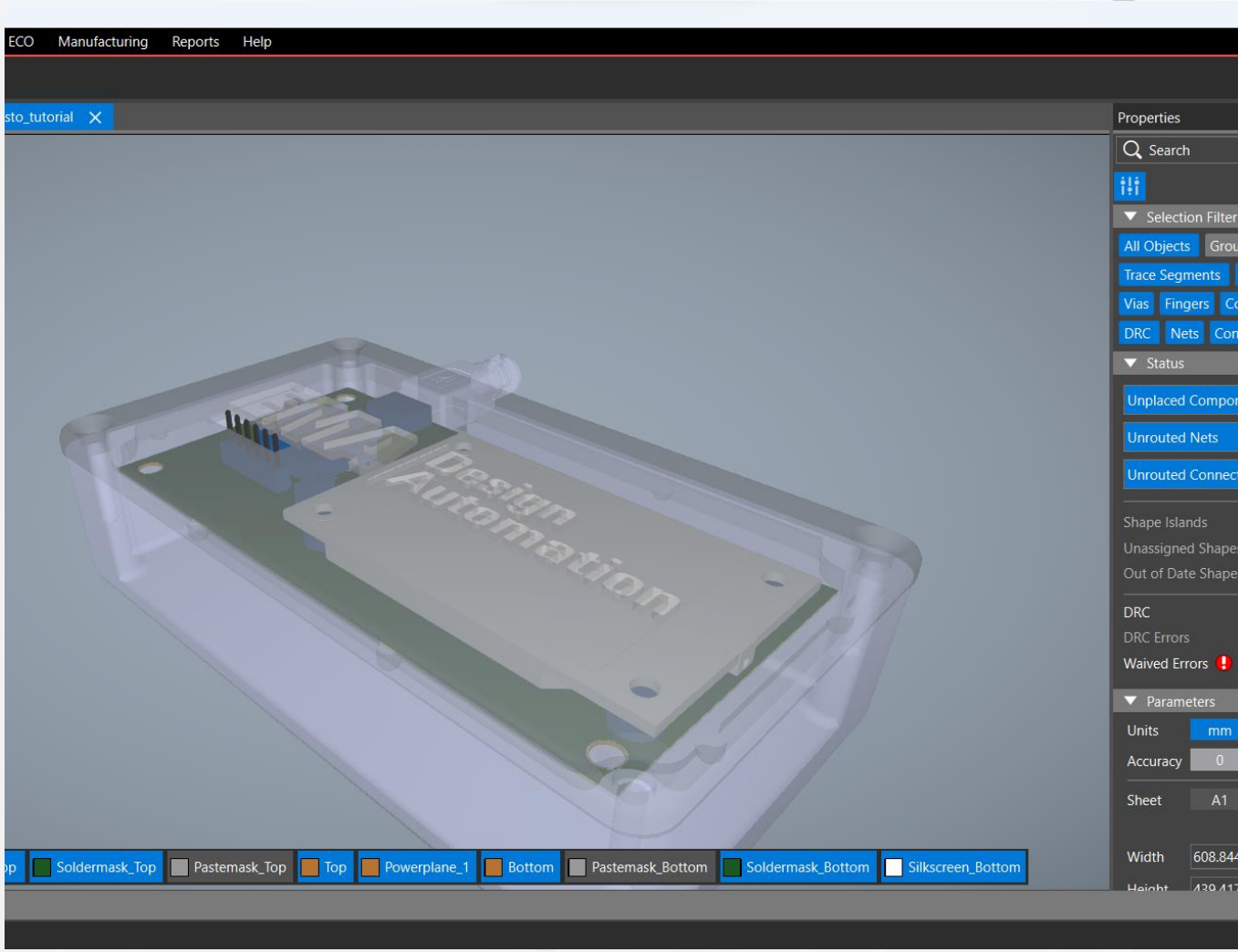
- DFM as you design
- Instantly see issues
- Make RTM a signoff step
- Integrate rules from popular CMs (DesignTrue Portal)



ELECTROMECHANICAL DESIGN

ECAD/MCAD

- New 3D engine, Built for performance
- Real-time 3D constraints
- Import mechanical elements – export design for mechanical integration



ELECTROMECHANICAL DESIGN

ECAD/MCAD

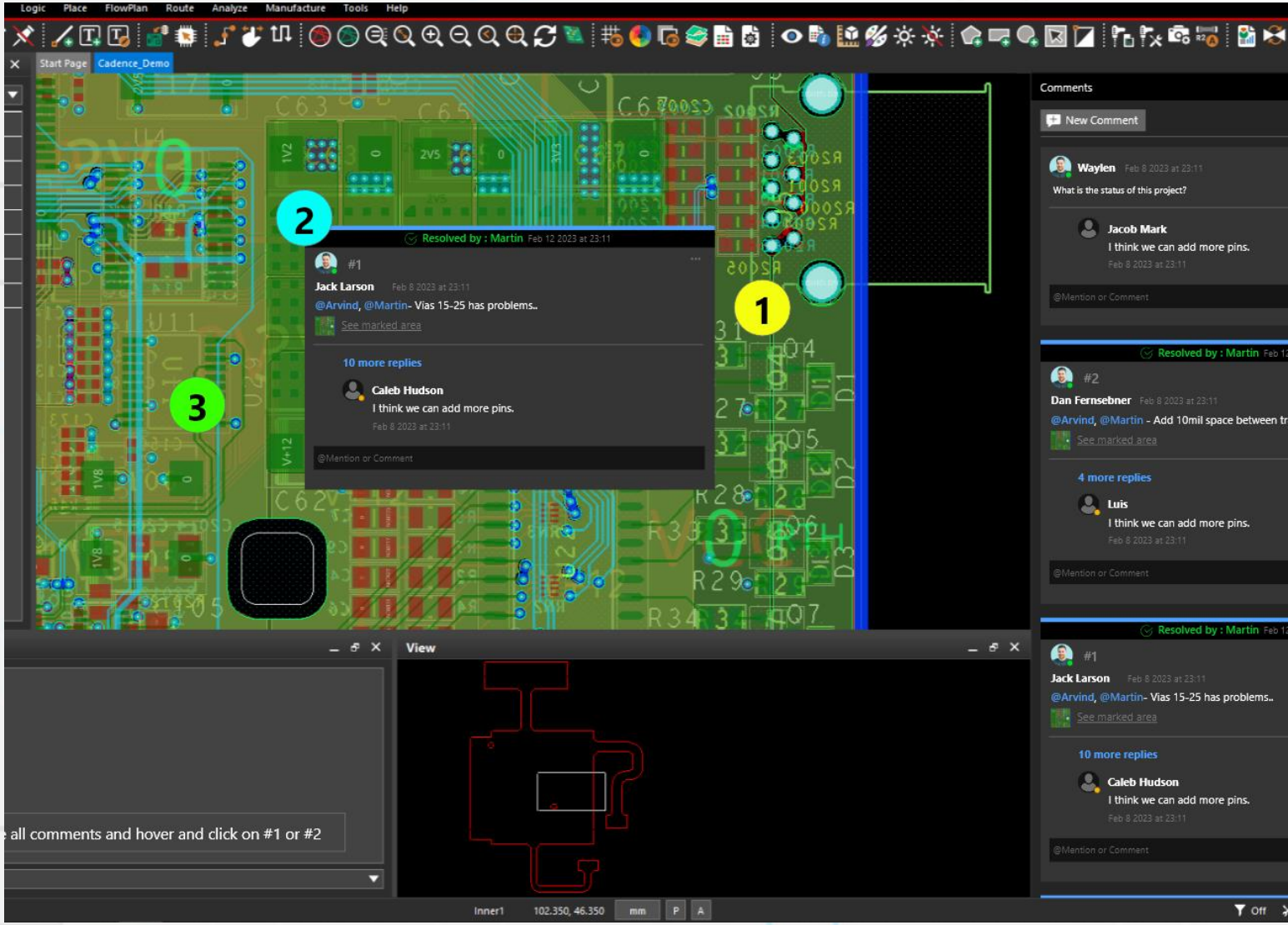
- Enhanced ECAD/MCAD Integration
- Dassault Partnership
- MCAD Flows Supported

ptc
SOLIDWORKS
CATIA
NX SIEMENS
SOLID EDGE
AUTODESK FUSION 360

COLLABORATION

Review & Markup

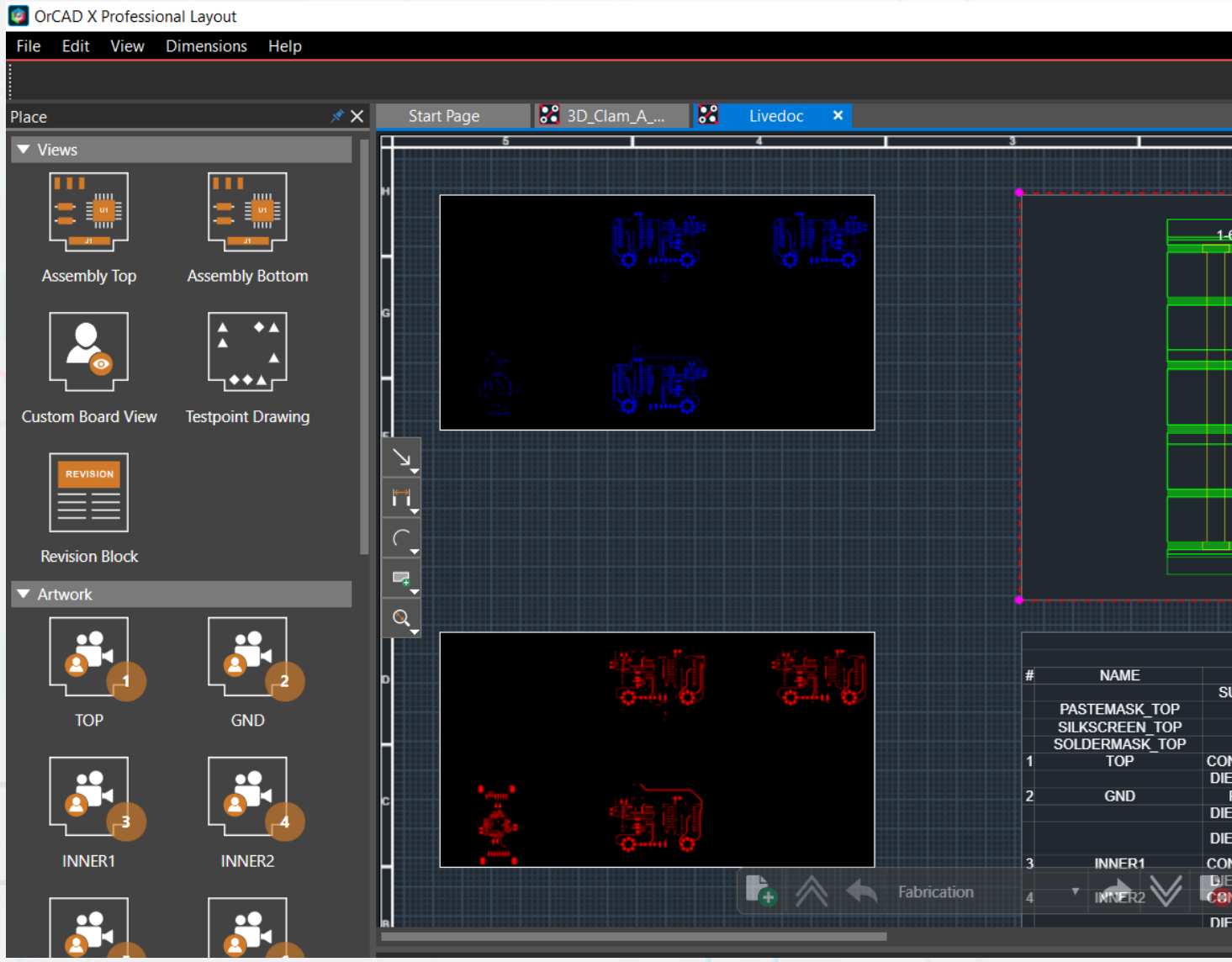
- Embedded Markup Layer
- Like GoogleDocs
- Stored in PCB database
- Commenting, Resolve, history tracking



DOCUMENT

LiveDoc

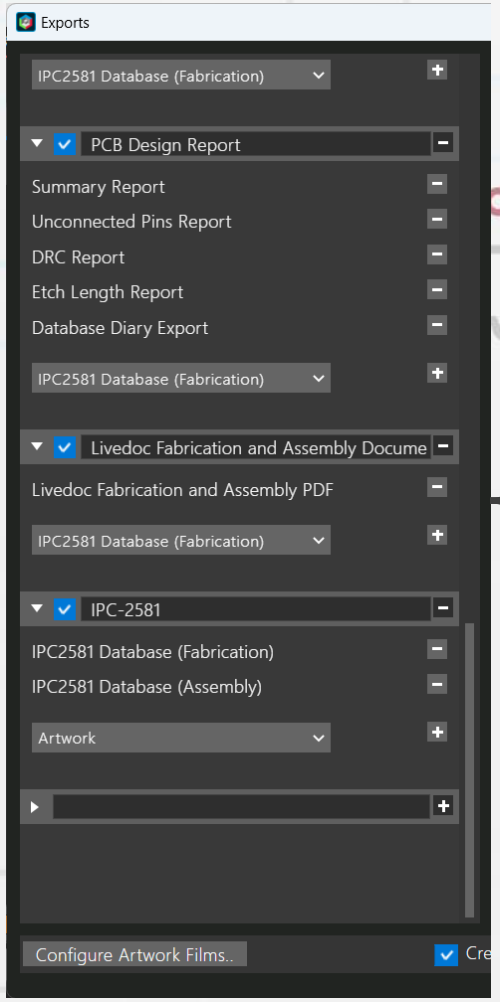
- Automated PCB Documentation
- Live Updates
- Template Driven
- Ensure docs are complete, up to date and ready

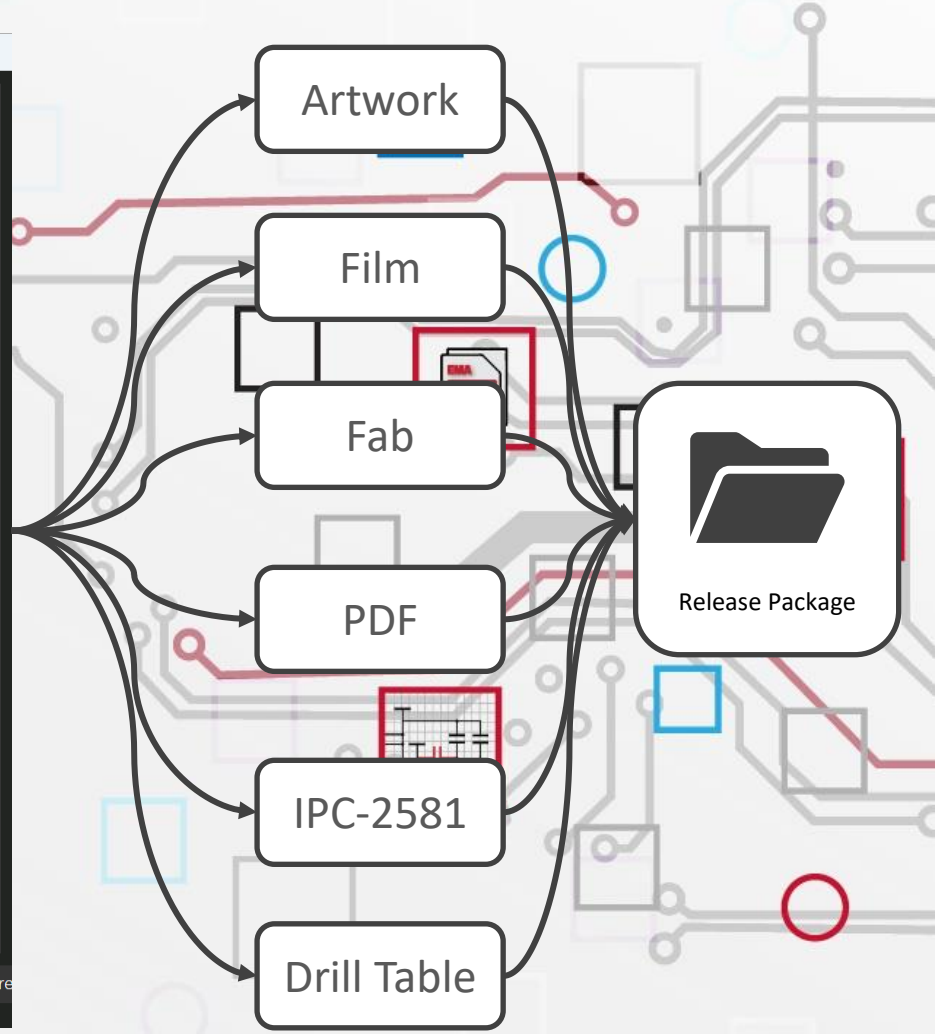


RTM PACKAGE

Release Packager

- Define & Customize Release Package
- All files & reports generated and placed in Zip file for delivery
- Template driven, always based on latest design data

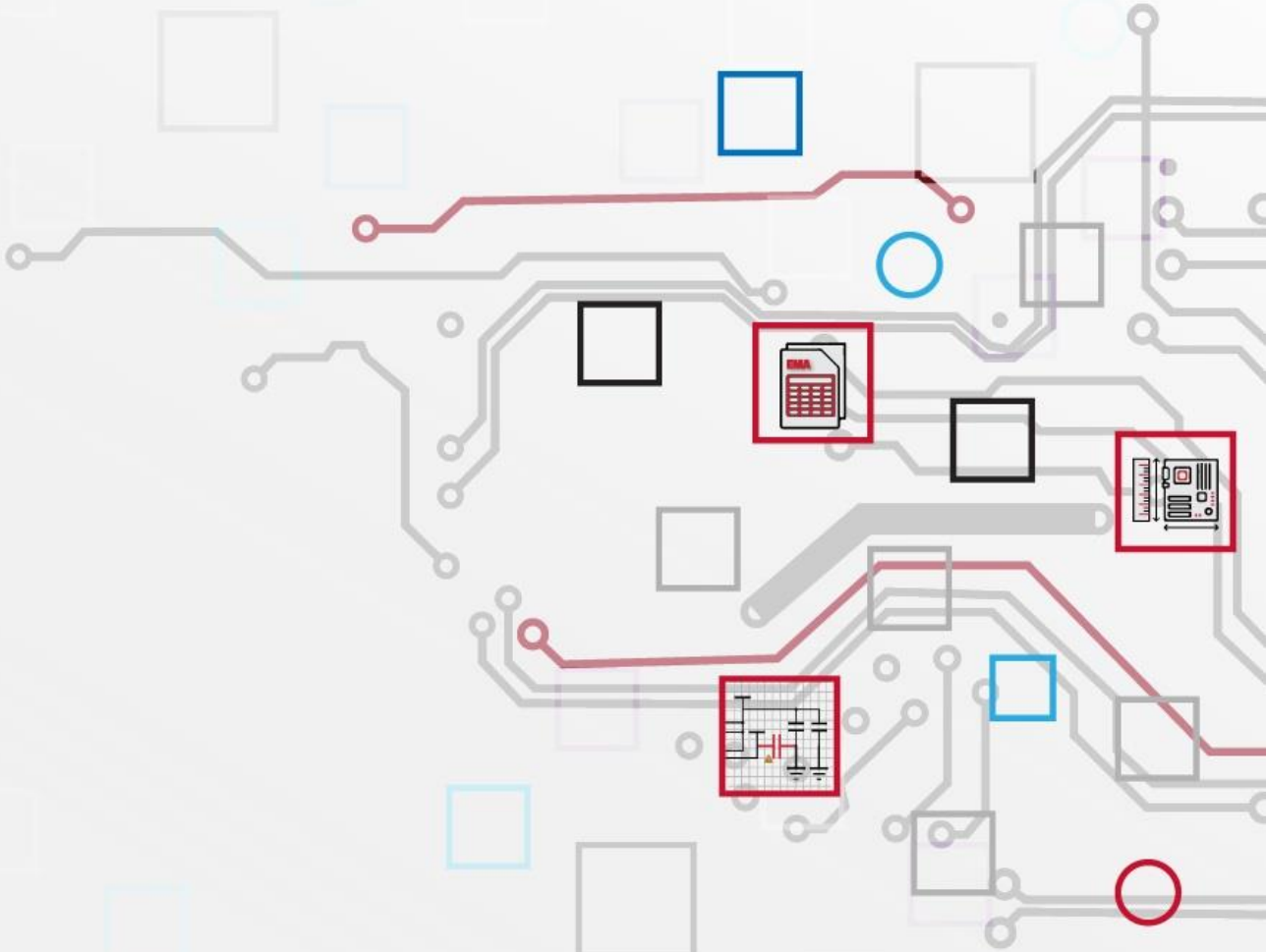




OrCAD X Platform Benefits

- Increase engineer efficiency & productivity
- Enable early analysis & optimization
- Provide in-context data for proactive problem solving
- Reduce / elminate late-stage errors – shift left
- Increase throughput, predictability, & accuracy

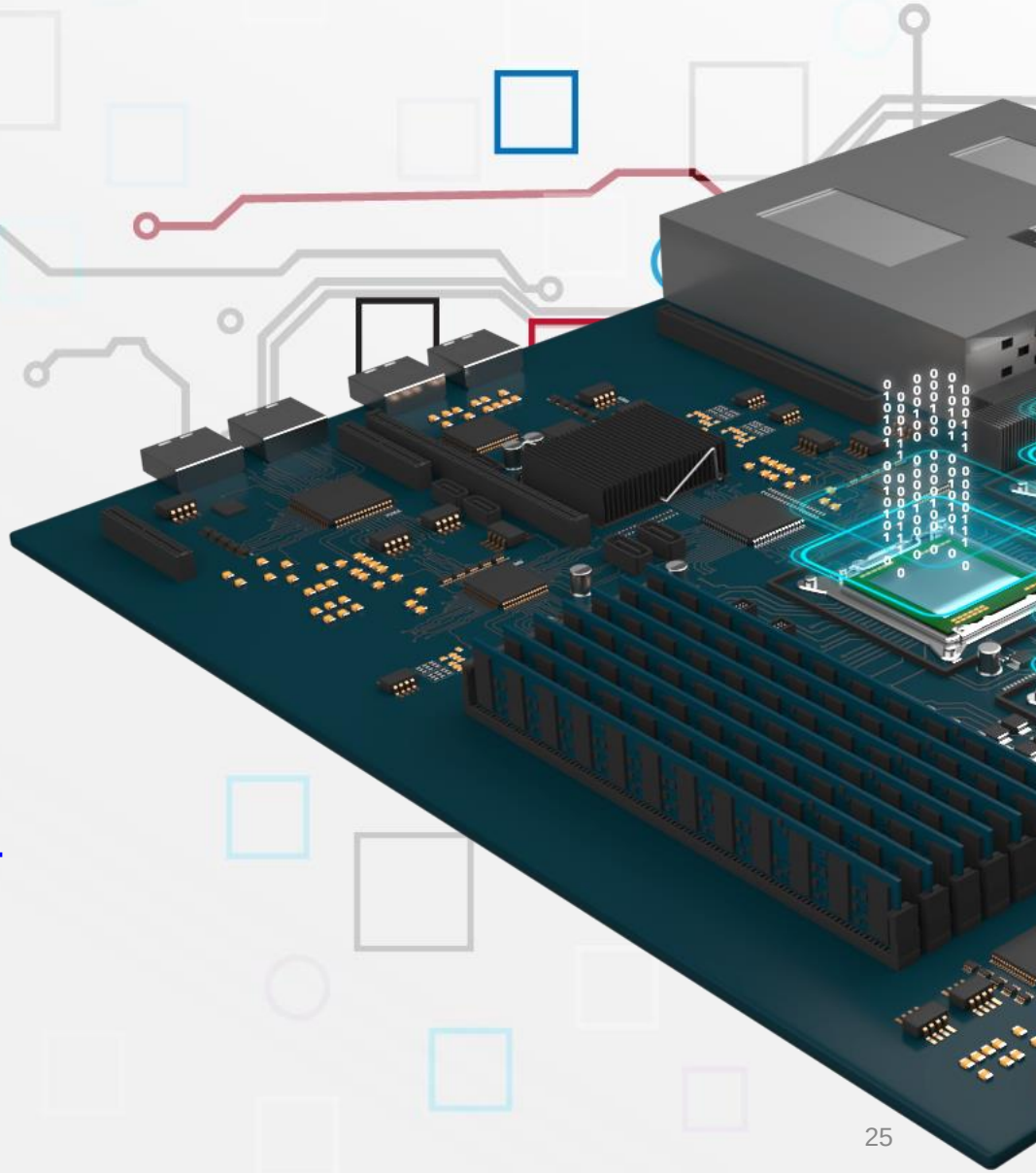
Demo



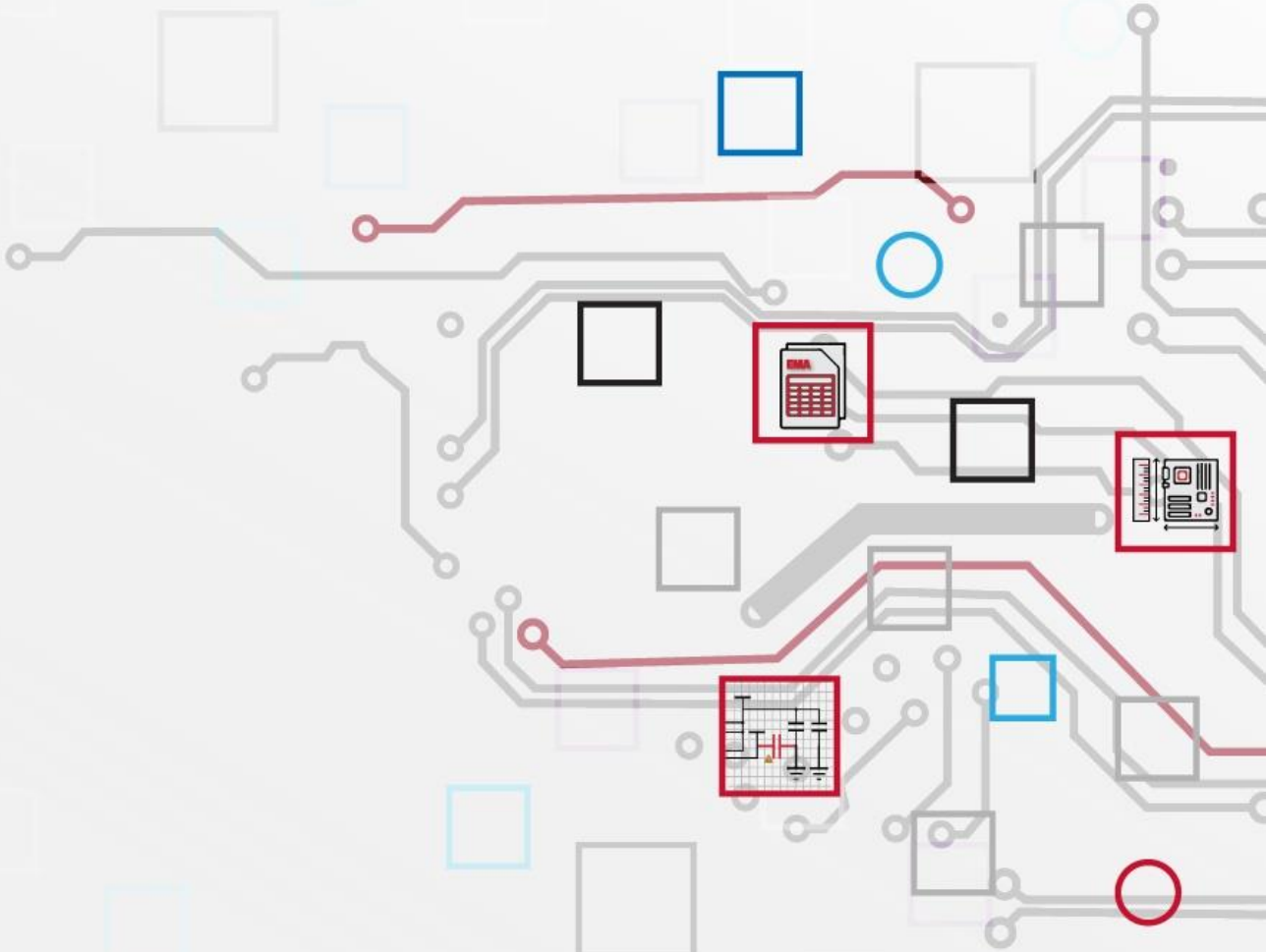
Thank You

Questions?

Contact us at:
info@ema-eda.com | www.ema-eda.com

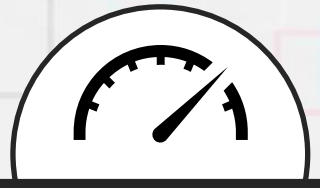


Backup



What's NeXt

The themes driving Cadence System Design Solutions for the next generation of electronics



MAXIMUM PERFORMANCE

Drive step function performance gains with each release

HIGHEST CAPACITY

Deliver scalable capacity to handle exponentially expanding datasets

SEAMLESS CONNECTIVITY

Enable data integration and collaboration throughout the flow

OPTIMIZED FOR PRODUCTIVITY

Produce a frictionless user experience for maximum throughput

SIGRITY X | OrCAD X | ALLEGRO X

Optimality | X AI | JedAI

Cloud/AI/ML ENABLED