



DIGITAL INDUSTRIES SOFTWARE

10 PCB design tool accelerators that get your products to market faster

Fast-forward product creation with powerful PCB design features that give you a competitive advantage

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ADVANTAGE 1

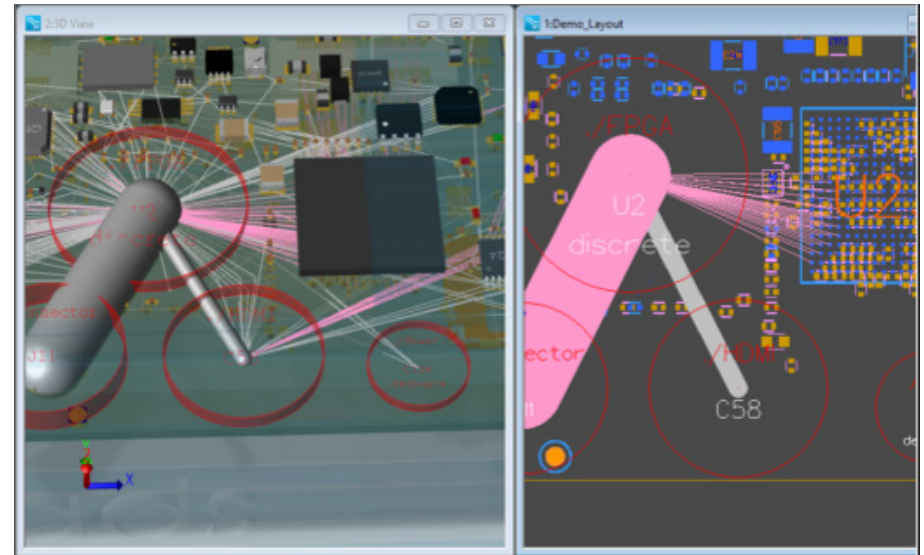
Planning groups accelerate placement

DID YOU KNOW:

Placement planning and management ensures engineers meet design intent to ensure an optimal component placement.

ADVANTAGES:

Quickly create, visualize, sort, organize and implement intelligent planning groups.



FACT

The #1 challenge in PCB design is increasing product complexity (smaller form-factors, larger circuits, etc.).

ADVANTAGE 2

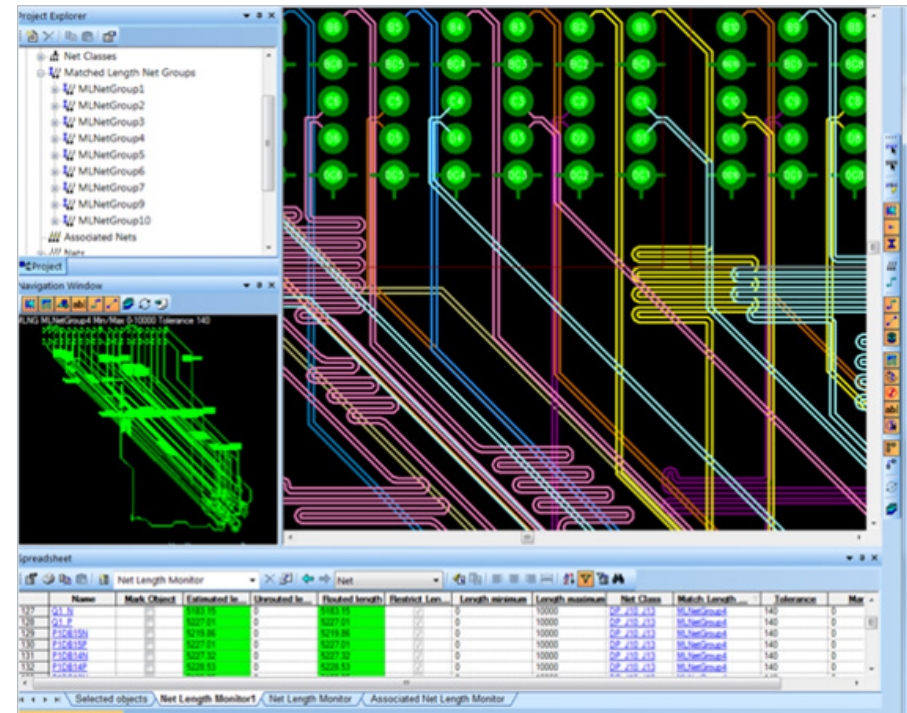
Advanced trace editing capabilities

DID YOU KNOW:

Advanced trace editing capabilities can dramatically decrease time-to-volume production, reduce costs and improve product design quality.

ADVANTAGES:

- Trace and via plowing smoothing
- Optimal pad entry
- Real-time trace-length monitoring
- Differential pair routing
- Automatic tuning of net groups with min/max length and matched-length constraints



FACT

Best-in-class companies are more likely than their peers to implement technology tools that can span across the PCB development process.

ADVANTAGE 3

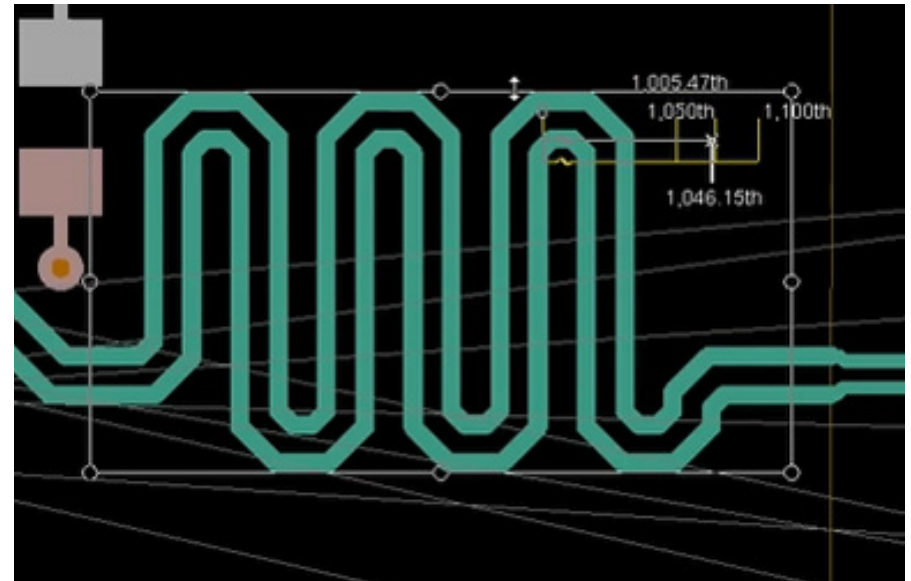
Fast, accurate group trace tuning

DID YOU KNOW:

Routing high-speed DDR (double data rate) nets requires a specialized set of capabilities.

ADVANTAGES:

This function treats trace tuning like an object which, when clicked on, displays a tuning box with dynamic measurements allowing the designer to adjust lengths on-the-fly and *fast*!



FACT

*The electronics industry is rich with competition.
Product differentiation through performance is key
to being an industry leader.*

ADVANTAGE 4

Advanced design rules

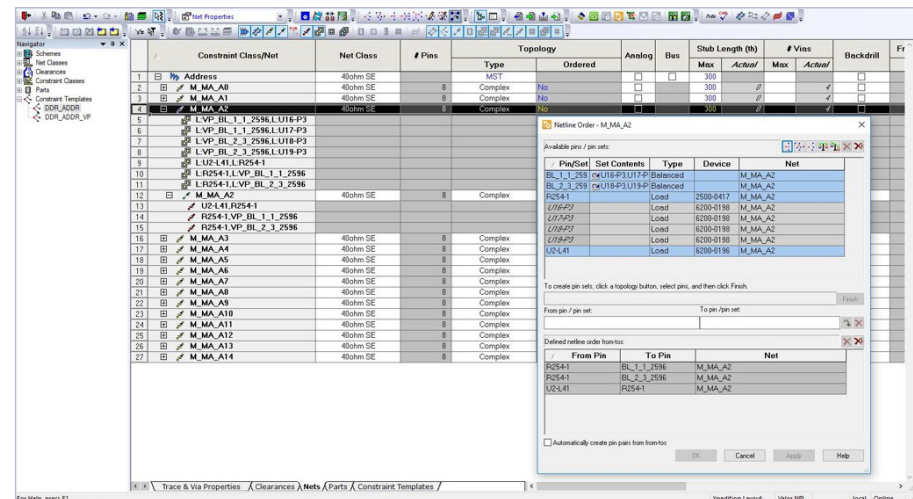
DID YOU KNOW:

You can identify and eliminate the electrical design violations that can cause SI, PI and EMI/EMC issues.

ADVANTAGES:

Advanced design rules ensure your product ships without signal integrity, power integrity or EMI issues.

It identifies the electrical design issues that manual inspection and PCB layout tool DRCs cannot catch.



FACT

According to an independent study 89 percent of PCB design developers and 77 percent of managers say that they design for technical performance, such as signal integrity, in order to achieve manufacturability and costs goals.

Source: Aberdeen Group Study – Why PCB Design Matters to the Executive

ADVANTAGE 5

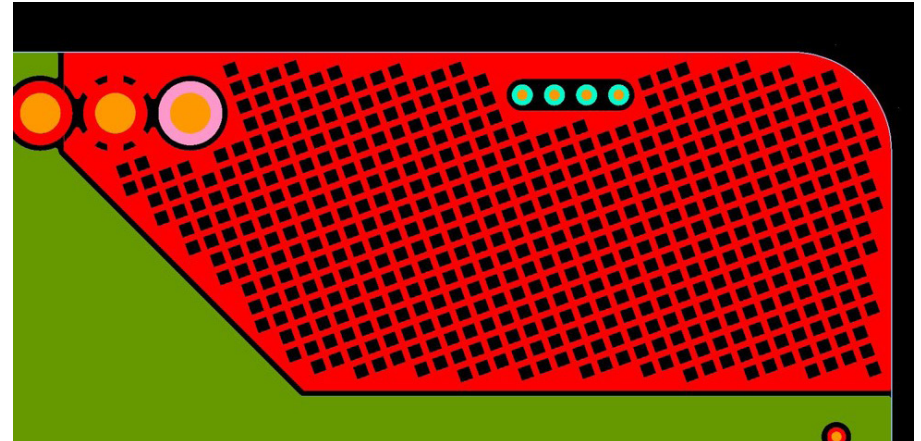
Advanced plane areas and editing

DID YOU KNOW:

PADS™ Professional software's dynamic plane generation engine provides fast, accurate and easy-to-visualize copper pour functionality that addresses large and complicated design requirements.

ADVANTAGES:

Functionality includes dynamic healing of plane data during editing sessions, real-time updates of planes and thermals and plane and thermal customization with overrides.



FACT

Correct-by-construction design methodologies improve PCB design efficiency and quality by reducing time-consuming cleanup of rules violations and ensures that the design is correct throughout the design process, so that you can get designs done fast and right the first time!

ADVANTAGE 6

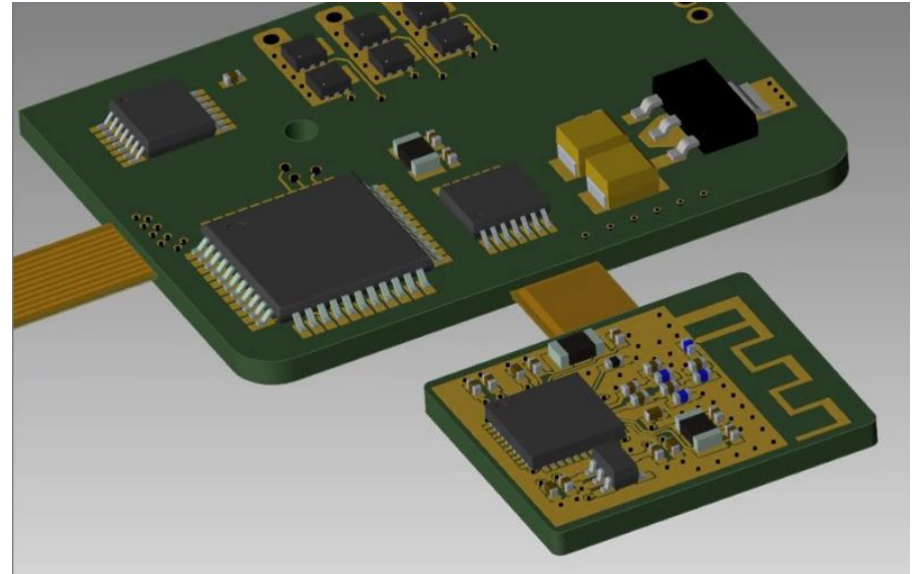
Leverage design re-use

DID YOU KNOW:

You can save substantial PCB design time by re-using existing IP with PADS Professional's physical design re-use.

ADVANTAGES:

Reduce PCB design time through physical design re-use. Using your proven circuitry reduces design time and enables you to outperform the competition.



FACT

Design re-use, whether it's logical, physical or a combination of both, can significantly reduce project schedules, improve accuracy and provide peace of mind as well as a competitive advantage.

ADVANTAGE 7

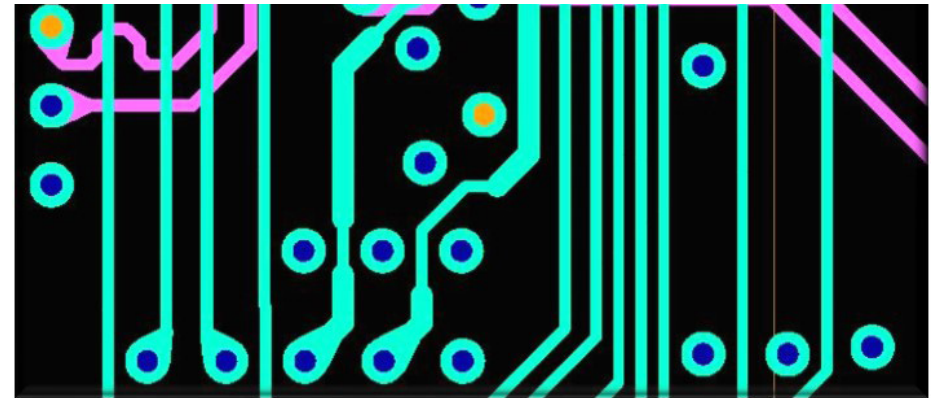
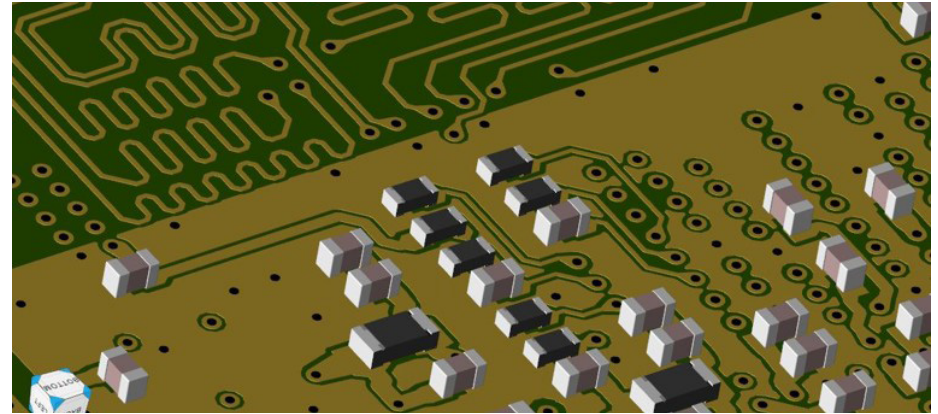
Automated teardrops and trace tapering

DID YOU KNOW:

Teardrops and trace tapering reduces mechanical and thermal stress resulting in less hairline cracks, reduces field failures and improves resistance to thermal shock.

ADVANTAGES:

Teardrops reduce stress bottlenecks where trace joints meet the pad particularly in rigid-flex designs. They provide strain relief, can eliminate annular ring breakouts and offer less resistance in RF circuitry.



FACT

Teardrops enhance structural integrity when thermal or mechanical stresses like vibration or flexing are present. They help avoid structural integrity due to misalignment during drilling and loosen manufacturing tolerances, making manufacturing easier and cheaper.

ADVANTAGE 8

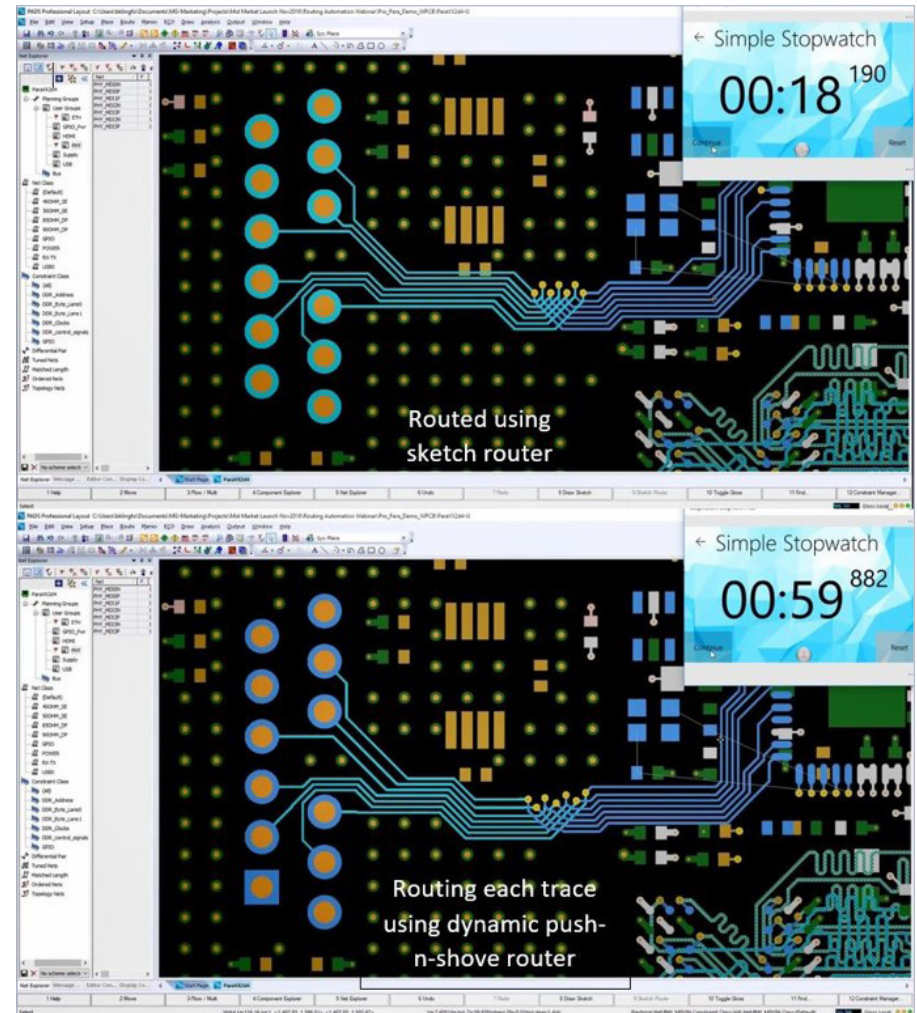
Sketch routing technology

DID YOU KNOW:

Teams that implement modern automated, intelligent placement and routing technologies like sketch routing accelerate cycle times by 25 to 50 percent while eliminating design issues caused by collision and space constraints.

ADVANTAGES:

Advanced routing technologies such as sketch routing can reduce product design schedules by 70 percent or more, are 3x more likely to complete their board designs on time and are at a higher quality compared to others.



FACT

Sketch routing results delivers the look and feel of manual routing.

Sketch routing technology gives you a competitive advantage.

ADVANTAGE 9

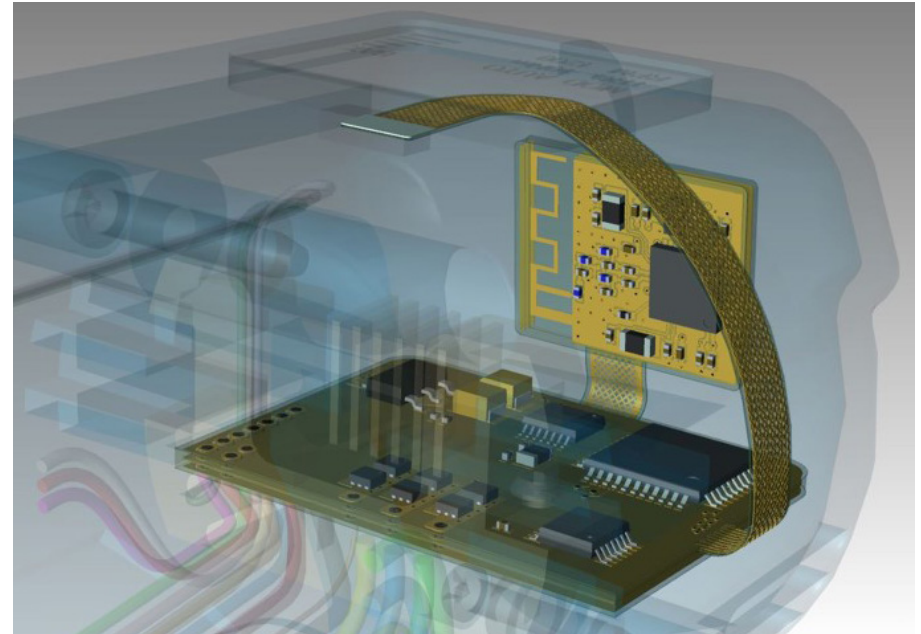
MCAD collaboration and 3D visualization

DID YOU KNOW:

82 percent of best-in-class companies are gaining a competitive advantage and eliminating design respins in electronics product design by utilizing real-time MCAD collaboration.

ADVANTAGES:

Reduced time-to-market, creates more robust designs, increases productivity, enables first-pass design success, eliminates design respins and reduces cost.



FACT

Poor electro-mechanical co-design processes, or a lack thereof, account for projects missing their time-to-market and cost targets by 50 percent or more.

ADVANTAGE 10

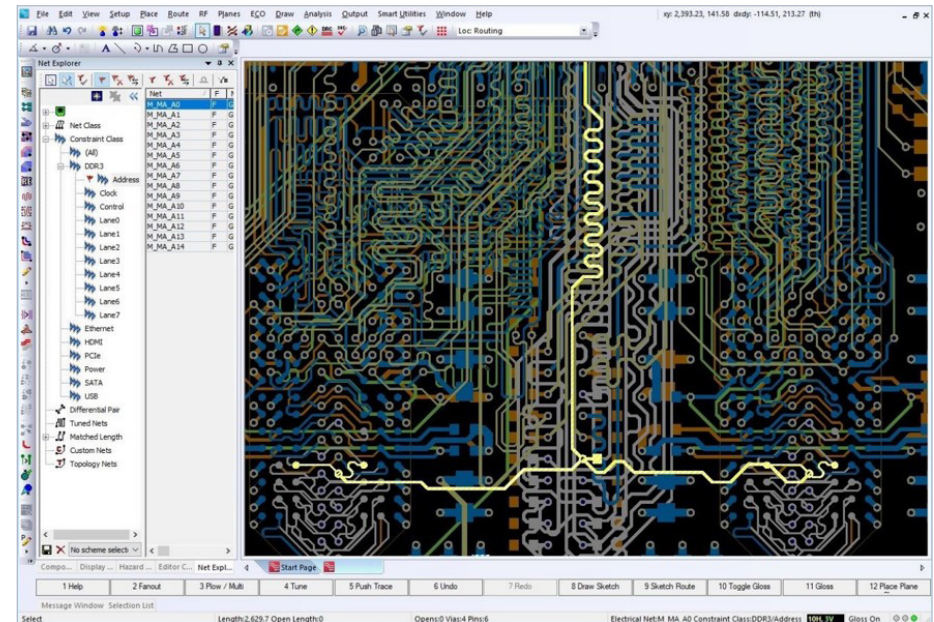
Powerful high-speed net routing and tuning

DID YOU KNOW:

There are new and powerful multi-trace high-speed routing and tuning capabilities that dramatically reduce design time when routing high-speed designs.

ADVANTAGES:

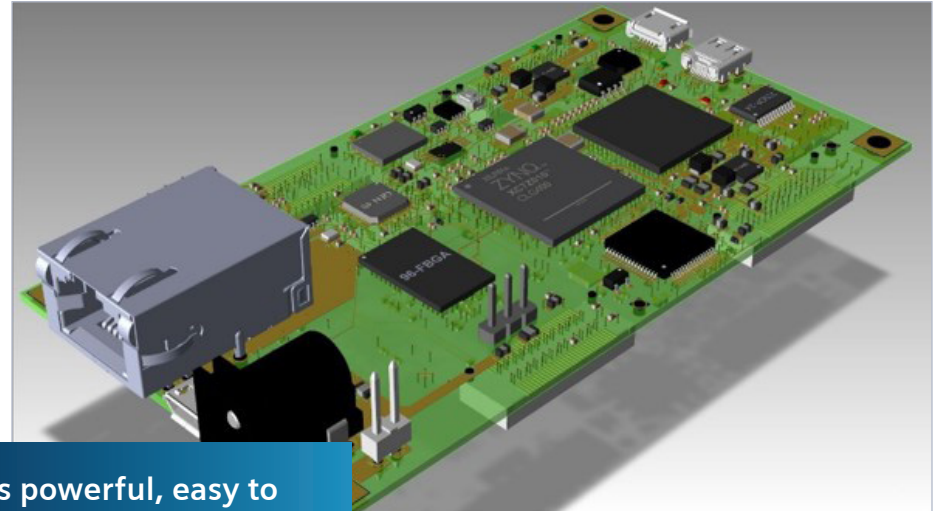
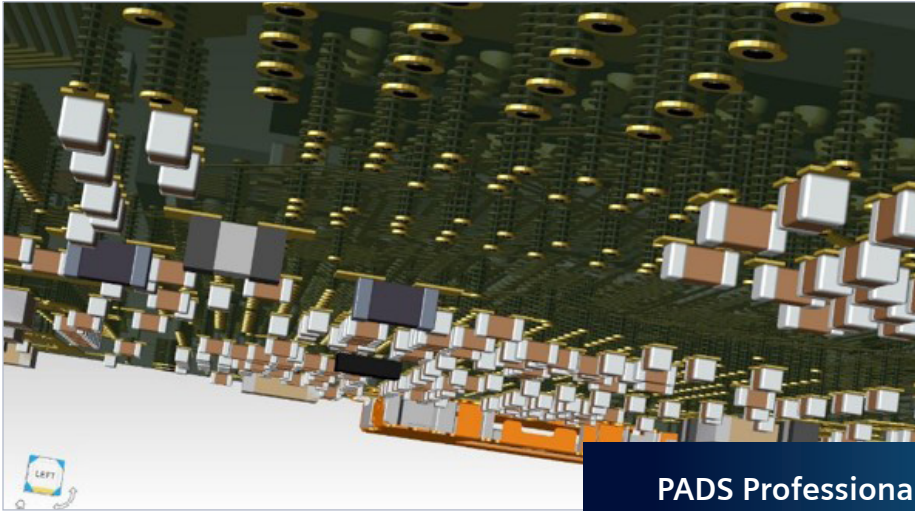
Set and protect net topologies and eliminate impedance changes. You gain superb control of matched-length, differential pairs and min/max length nets anywhere in the rules hierarchy.



FACT

Antiquated routing techniques and a lack of automation can cause schedule delays of up to 70 percent or more.

Why PADS Professional?



PADS Professional is powerful, easy to learn, use and afford.

PADS Professional's advanced PCB design capabilities provide small teams and independent designers and engineers with competitive advantages that will reduce your product design cycles and avoid costly design respins, empowering you to get products to market faster!

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