

- NOTES**
1. MATERIAL: ALUMINIUM 6082-T6
 2. REMOVE ALL BURRS AND SHARP EDGES.
 3. ALL UNDIMENSIONED RADII TO BE 1 mm,
ALL UNDIMENSIONED CHAMFERS TO BE
1 mm X 45°.
 4. FINISH: NATURAL

Validate Before You Build,
Perform Without Compromise

Simulation and Analysis Solutions

Precision Begins with Simulation

Great hardware doesn't happen by trial and error but engineered through insight. At *Powersoft19*, our simulation and analysis services help clients de-risk product development, improve performance, and accelerate time-to-market. From circuit-level to full-system modeling, we blend deep engineering expertise with advanced simulation tools and AI-driven analysis—ensuring your designs are ready for the real world, before they ever hit the floor.

Challenges Enterprises Face Today

High Costs. Long Cycles. Unpredictable Performance.

Hardware development is more complex and costly than ever.

Key challenges include:

- High prototyping and rework costs due to late-stage issues
- Inadequate visibility into failure points or thermal stress
- Limited signal integrity in high-speed designs
- Safety compliance hurdles requiring deep physical validation
- Lack of simulation expertise in-house or inconsistent tooling

Our Approach? Simulate Smarter, Build Stronger

We enable simulation-driven design with a practical, results-first mindset. Our cross-functional teams run precise simulations—thermal, electromagnetic, structural, and more—early in the design cycle to eliminate costly surprises. We use AI/ML to accelerate analysis, predict anomalies, and generate optimization paths in complex systems. The result: faster validation, fewer iterations, and higher confidence.

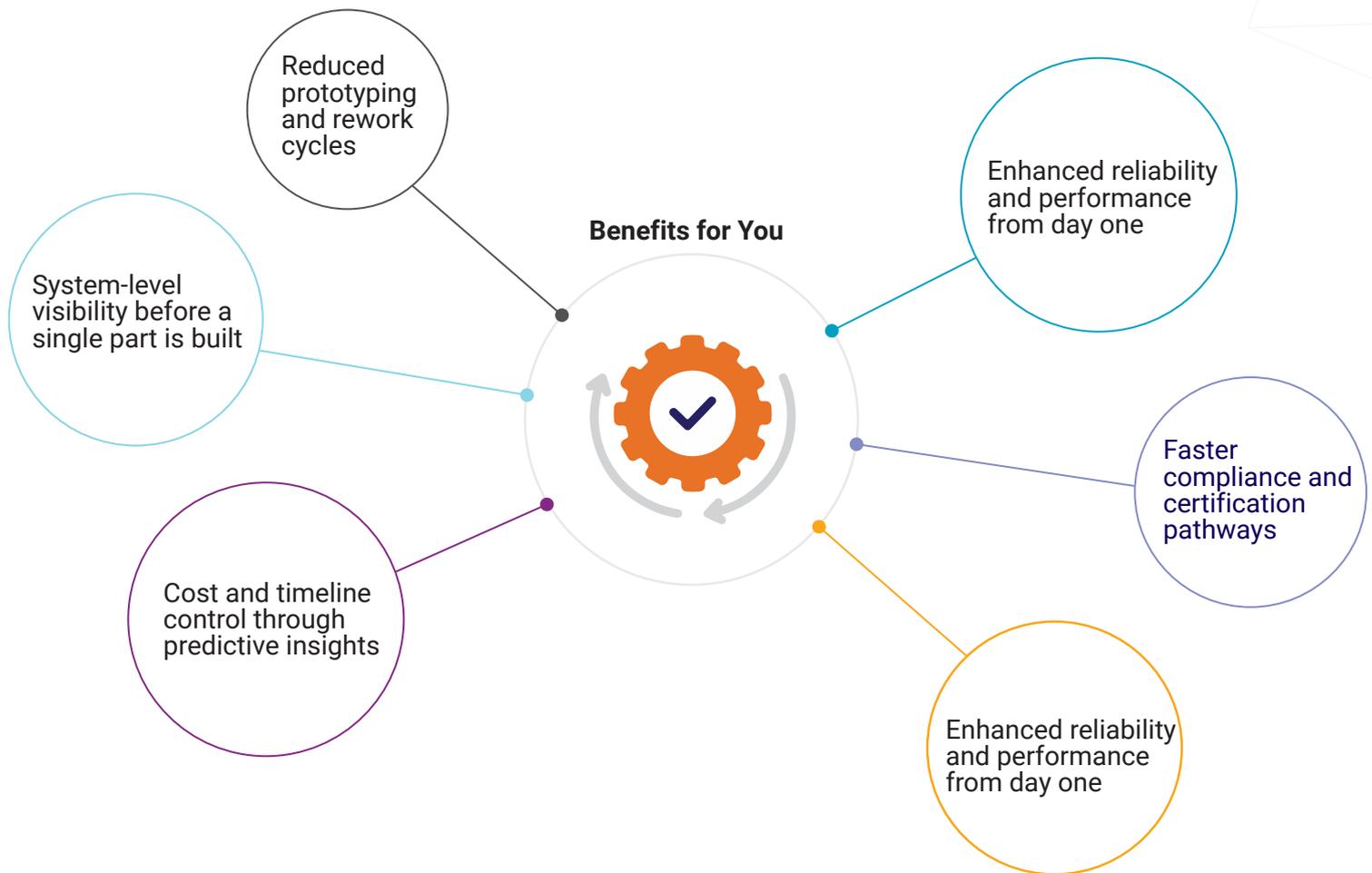
Comprehensive Simulation & Engineering Analysis Services

- Signal integrity (SI) and power integrity (PI) analysis
- High-speed PCB and backplane simulation
- EMI/EMC simulation and mitigation strategies
- SPICE modeling and schematic verification
- Thermal flow, heat sink design, and cooling optimization
- Structural analysis under mechanical stress/vibration
- Thermo-mechanical coupling and materials selection
- Enclosure design validation and compliance simulation
- Digital twins for system-level behavior and performance
- Multi-domain simulation (electrical, mechanical, thermal)
- AI-assisted optimization and failure prediction
- Model-based systems engineering (MBSE)
- IEC, ISO, UL, CE design validation support
- Safety integrity level (SIL) and functional safety modeling
- Fatigue analysis, reliability prediction, worst-case scenario modeling

Why Work With Powersoft19?

- Simulation expertise backed by deep engineering knowledgebase
- 25+ years of experience in hardware development, analysis, and validation
- Certified experts in electrical, thermal, and structural domains
- Multi-physics simulation capability under one roof
- AI/ML integration into simulation pipelines
- Industry experience across aerospace, defense, automotive, energy, and industrial systems
- Tool-agnostic, results-driven, and documentation-ready

Less Guesswork, More Certainty, and Faster Launches



Let's Begin Our Journey Together

Don't just design, simulate the success. Partner with *Powersoft19* to uncover issues before they happen, optimize with confidence, and build with precision. Visit our website to begin your simulation-driven development journey.

Contact Us

Drop us a line and let us know what we can do for you. There is no limit to what can be made possible with our passionate team. Here are some examples:

- Come up with ideas to solve challenging issues faced by your business.
- Execute complex project/product ideas.
- Take the burden of managing legacy products off your shoulders.
- Provide a skilled project team to augment your in-house resources.
- Provide consultancy regarding industry standards and market trends.
- Design a customized partnership model with *Powersoft19* that empowers you to beat the competition.



USA/International:

 www.powersoft19.com

 info@powersoft19.com

Europe:

 www.powersoft19.eu

 info@powersoft19.eu