



## Visit us

11668 Olive Spring Ct, Cupertino, CA 95014  
PWD parking available.

+1 (408) 650 2999  
<https://heat-sync.com>  
[info@heat-sync.com](mailto:info@heat-sync.com)

### About US

**HeatSync** is an engineering consulting firm based in the heart of Silicon Valley, specializing in **thermal management solutions** for electronics and battery energy storage. With nearly 150 years of combined experience, we offer expertise in **design architecture, optimization, simulation, and prototyping**. Our team of engineers, designers, and researchers are committed to delivering innovative solutions across a variety of industries.

## Advanced Battery Thermal Management Solutions



Explore how HeatSync optimizes battery performance and safety through innovative thermal management solutions.

HeatSync offers comprehensive thermal management solutions for Li-ion batteries across a variety of applications, including consumer electronics, electric vehicles (EVs), residential and grid-level energy storage systems, and aviation. With a deep understanding of the multiphysics nature of Li-ion batteries, our solutions enhance performance, safety, efficiency, and longevity.

We specialize in the design, simulation, testing, and optimization of battery thermal management systems. Our team of engineers is committed to ensuring safety compliance while implementing innovative strategies tailored to the evolving needs of battery technology.

## Core Services

### In-Depth Battery Characterization

We conduct comprehensive battery characterization services to ensure performance and reliability under diverse conditions. Our tests include relaxation tests, OCV measurements, EIS, and HPPC.

### Battery Cooling Solutions

Our team develops optimized air and liquid cooling solutions for battery systems, from initial design to prototyping and mass production, ensuring safety, efficiency, and compliance with the highest standards.

### Real-Time Temperature Mapping & Performance Analysis

We provide real-time temperature mapping, system-level modeling, and performance analysis of battery cooling solutions, extending battery life while maximizing safety and efficiency.

### Virtual Temperature Sensors

Our virtual sensors provide real-time temperature monitoring of Li-ion batteries, improving safety and performance.

### Advanced Simulation Services

We excel in thermal, shock, and vibration analysis using real-time models and digital twin technology. Our simulations cover everything from thermal propagation and runaway analysis to battery aging studies.

### Digital Twins & ROM Development

Our Digital Twin and Reduced Order Models (ROM) offer precise, real-time insights into the thermal and electrical performance of battery systems, enabling optimized design and operation.

### Compliance and Future-Readiness

We ensure that your battery systems comply with current safety standards like UL and NFPA, while also aligning with evolving DCA requirements, tariffs, and battery chemistries.

### Integrated Electronics Thermal Management

HeatSync's expertise extends beyond batteries to encompass the broader thermal management of electronics within battery systems. We provide architectural design and optimization of electronics to enhance overall cooling efficiency.

### Specialized Staffing Services

We provide expert test engineers and designers for thermal management projects, offering both short-term and long-term staffing solutions.

